University of Baghdad
College of Education for Pure Science
(Ibn Al-Haitham)

Proceedings of Ibn Al-Haitham 1st. International scientific Conference - 2017

IHSCICONF - 2017

Part 1 : IOP Publisher

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Preface

IHSCICONF 2017, International Conference on Biology, Chemistry, Computer Science, Mathematics, and Physics, Take place in Baghdad, Iraq, from December 13-14, 2017. IHSCICONF 2017 is assisted by the College of education for pure science – Ibn Al Haitham \ University of Baghdad and with supporting of the American Chemical Society (ACS) in Iraq.

IHSCICONF 2017 aimed to distills the most current knowledge on a rapidly advancing discipline in one conference. Join key researchers and established professionals in the field of Biology, Chemistry, Computer Science, Mathematics and Physics as they assess the current state-of-the-art and roadmap crucial areas for future research.

We aimed to build an idea-trading platform for the purpose of encouraging researcher participating in this event. The papers to be presented at IHSCICONF 2017 address many grand challenges in sciences. The full papers that presented are peer- reviewed by three expert reviewers.

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Opening ceremony of the Conference

Closure of the Conference

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Keynote Speakers Of the Conference

IHSCICONF-2017

Assist. Prof. Dr. Mohammad Mahdi Ahadian
I. R. Iran

Assistant director of Institute for Nanoscience and Nanotechnoilogy .
Specialization: Surface science, Characterization in nano-scale

Citations	626	446
h-index	15	12
i10-index	20	15

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Associate Prof. Dr. Saeed S. Al-Alawi
Kingdom of Bahrain

Ph.D. (Analytical Chemistry) Strathclyde University , Glasgow, UK. Dec. 1981
B.Sc. (Applied Chemistry) Basreh University, Iraq, 1978

Experience and duty occupied

From 1982 to 2015; Associate professor in College of Science.
1991-1995 chairman of Chemistry Department, College of Science, University of Bahrain.
2007 - 2011, Director of Continuous Science Eduction in College of Science.
1991- 2001, Fonder and Chairman of Bahrain Chemical Society
1992-2006; organising a series conferences (Chemistry in Industry) in collaboration with Armco.
1992 - 2002; Organising and performing a series of Cleaner Production workshops in Collaboration with UNEP office in Bahrain.
2002 to 2004: Conducting a series of regional workshop in Bahrain in Chemical safety and Security in collaboration with Sandia laboratory in USA.
Since retirement in 2015, I own consultancy company in Environmental Chemistry.

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Prof. Dr. Ali H. Reshak
Iraq
Resident in the Czech Republic

Full Professor Dr. Senior Scientist
Qualification: B.Sc, M.Sc, Ph.D Physics, Ph.D Eng
h-index 32 + (web of Science) with 4816 citations
The winner of the Abdul Hameed Shoman Award.
Durham University senior fellow (UK).
Recently have been awarded a Honorary Doctorate of Engineering from the University of Malaysia Perlis for my achievements in Sciences and Technology

Present Occupation:

1. Full Professor at West Bohemia University , in Plzen-Czech Republic
2. Full Professor for Special assignments at University of Malaysia Perlis- Malaysia ,
3. Professor at Czech Technical University, Faculty of mechanical Engineering – Prague - Czech Republic ,
4. Visiting Professor at Department of Physics and Astronomy, King Saud University, Saudi Arabia.
5. Editor-In-Chief :Journal of Laser and Optics Advances Specialized Research- JLOASR

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Prof. Dr. Fuad El Hahj Hassan
France
Lebanese University, Faculty of Sciences, Department of Physics , Beirut-Lebanon

- Maîtrise in Physics (Lebanese University).
- D. E. A "master" Metz University, France.
- PhD thesis in materials sciences at LPLI Institute of Metz University (France).
- Diplôma «TUXEDO Administration and development» BEA System – Tour Manhattan; Paris la défense-France.
- Diplôma « Utilisateur Rational Clearcase (NT) » Rational University – The development company-Franced.
- School on: Electronic-structure calculations and their applications in materials science ICTP – INFM/Democritos – ISMO – IUT (Isphahan) 25 April – 6 May 2005.

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Prof. Dr. Ram K. Agarwal
India

received his Ph.D (1980)and D.Sc.(2000) PG Diploma in Macromolecular Chemistry from Charles University, Czech Republic in 1981 . He served at Meerut College as a lecturer in Chemistry from 1969 to 1970 and then were invited into Lajpat Rai College (Ch. Charan Singh University, India) as a Senior lecturer to Associate Professor yet retired in June 2011. He was also an Associate Professor at University of South Pacific, Suva, Fiji from 2003 to 2005. In 2008, he became a Professor of Eritrea Inst. of Technology, Asmara, Eritrea. Up till now, He has published a total number of 250 works and supervised 35 Ph.D. students. He has took part in many international activities held in USA, Czech Republic, Egypt, Jordan, Qatar, Poland, Thailand, China, Hong Kong, Korea, Fiji, Bali-Indonesia and Dubai etc. At present, he is the Editor in Chief of Asian Journal of Chemistry with his main research interests covering coordination chemistry and bio-inorganic chemistry fields.

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Prof. Dr. Suvardhan Kanchi
India
Chemistry

Durban University of Technology · Department of Chemistry , Durban, South Africa.

Dr. Kanchi is the Research Scientist in fabricating the bio-sensors for the identification and quantification of high intensity artificial sweeteners in food stuff's and biological samples. He completed his post doctoral research in Separation and Determination of High Intensity Artificial Sweeteners (Sucralose, Neotame & Stevia glycosides with Capillary Electrophoresis and electrochemical methods (biosensors) in different Food Stuff's from Durban University of Technology, Durban, South Africa. He is associated with the Indian Society of Analytical Scientists (ISAS), India. He is also serving as the Executive Editor for American Journal of Phytomedicine and Clinical Therapeutics; EB member for International Journal of Research in Chemistry and Environment and many more. He is also having several reviewer experiences for many articles

Research Interest

Applied Chemistry, Pharmaceutical Research, Phytomedicine and Clinical Therapeutics, Environmental Technology and Management.

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أ.د. نبيل محي عبد الحميد علي
جمهورية مصر العربية
عميد كلية الصيدلة / جامعة كفر الشيخ / جمهورية مصر العربية.

الدرجة العلمية : أستاذ الكيمياء الحيوية (تخصص دقيق : بيولوجيا الأورام , مع التركيز على أورام الكبد - التشخيص المبكر لأورام الكبد و إستحداث أدوية من ضمنها الأعشاب لعلاج أورام الكبد ، إضافة إلى دراسة سمية بعض الكيماويات على الكبد فى نماذج تجريبية.

1. بكالوريوس الصيدلة مايو 1985 م . من كلية الصيدلة / جامعة الزقازيق .
2. ماجستيرفى الكيمياء الحيوية مايو 1989 م من كلية الصيدلة / جامعة الزقازيق.
3. دكتوراه فى الكيمياء الحيوية اكتوبر 1999 م من كلية الصيدلة / / جامعة الزقازيق.

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Sessions Of the Conference

Al- Mansour Melia Hotel				
Day 1	**Wednesday**	**morning Session**	**Date**	**Dec. 13 , 2017**
Session	**Main**		**venue**	**Cordoba Hall**
9:00 – 10:00	**Ceremony of the Conference Opening Session**			

Al- Mansour Melia Hotel				
Day 1	**Wednesday**	**Keynote Speakers**	**Date**	**Dec. 13 , 2017**
Session Duration	**10:00-11:00**		**venue**	**Cordoba Hall**

Title	Speaker	
The contribution of scientific research toward development and solving the troubles of the country by concentrating on applied aspects of research	**Dr. Walid A. GH. Al- Hilli** (Chemistry) Iraq Advisor to the Prime Minister	
Nanotechnology - the New Horizon	**Prof. Dr. Ali H. Reshak** (Physics , Engineering) Iraq West Bohemia Univ./Czech Rep. Univ. of Malaysia Perlis/ Malaysia.	
Biosensors in Food Applications	**Prof. Dr. S. kanchi** (Environmental Chemistry) India Durban Univ. of Technology/S. Africa	

Al- Mansour Melia Hotel				
Day 1	**Wednesday**	**Keynote Speakers**	**Date**	**Dec. 13 , 2017**
Session Duration	**11:30-12:00**		**venue**	**Cordoba Hall**

Title	Speaker	
Difference Between Normal & Cancer Cell	**Prof. Dr. Nabil M. Abdelhamid** (Biochemistry) Egypt Dean of Pharmacy College/Kafrelsheikh Univ./Egypt	
Antioxidant Activity of Methanolic Plant Extract & their effect on Fish spoilage prevention	**Prof. Dr. Saeed S. Al-Alawi** (Analytical Chemistry) Kingdom of Bahrain Advisor in environmental Chemistry	

Al- Mansour Melia Hotel				
Day 1	**Wednesday**	**Keynote Speakers**	**Date**	**Dec. 13 , 2017**
Session Duration	**11:30-12:00**		**venue**	**Al-Hamraa Hall**

Title	Speaker	
The full potential-linearized augmented plane wave method within Density functional theory	**Prof. Dr. Fuad Elhaj Hassan** (Physics) France Lebanese Univ., Fac. of Sciences I, Dept. of Physics	
Recent application of nanotechnology in oil and petroleum industry: two examples	**Assist. Prof. Dr. Mohammad M. Ahadian** (Surface Science) I.R. Iran Inst. of Nanosci. & Nanotech./ Sharif University of Technology	

Al- Mansour Melia Hotel				
Day 2	**Thursday**	**Keynote Speakers**	**Date**	**Dec. 14 , 2017**
Session Duration	**9:00-10:00**		**venue**	**Dept. of Physics Seminar Hall 2**

Title	**Speaker**	
Designing of Multifunctional Thiosemicarbazones Derived from Heterocyclic Compounds and Their Metal Coordination Compounds in Biological and Medicinal Inorganic Chemistry	**Prof. Dr. Ram K. Agarwal** (Macromolecular Chemistry) India Editor in Chief of Asian Journal of Chemistry	

Al- Mansour Melia Hotel				
Day 1	**Wednesday**	**Afternoon Session**	**Date**	**Dec. 13 , 2017**
Session	**1bio1a**		**venue**	**Cordoba 2 Hall**

Session Theme	**Biology**
Session Duration	**(1:00 –2:30) pm.**
Session Chair	**Prof. Dr. Abdulhusaain M. Al-Faisal**
Rapporteur	**Assist. Prof. Dr. Ihsan I. Hussain**

Time	Code	Title	Author
1:00-1:12	5	Comparative Analysis Of Various Techniques For Giardia Lamblia Detection And Association With E Coil And Shigella Among Children Attending Al-Imamin Al- Kadhimin Medical City	Rawaa A. Hussein, **Areej A. Hussein**
1:12-1:24	170	The Role Of Staphylococcus Haemolyticus In Men Infertility	**Ghaeda J. Al-Ghizawi**, Zahraa K. Jomaa
1:24-1:36	252	Antifungal Activity Of Solanum Niger Extract Against Microsporum Canis, The Causative Agent Of Ring Worm Disease	**Yasser M. Al-Qertani**
1:36-1:48	260	The Congenital Malformations In White Pregnant Mice Fetus Induced By Metformin Drug	**Faeza N. Toama**, Aziz Kh. Hamid, Asmat J. Jameel
1:48-2:00	317	Checklists Of Parasites Of Stray Cats Felis Catus L. Of Iraq	**Abdulrahman A. Altae**, Abdulrrazzak L. Alrubaie
2:00-2:12	25	Study The Seroprevalence Of Viral Hepatitis And Hiv Among Hemodialysis Patients	**Batool M. Mahdi** Inass M. Kamal

College Of Education For Pure Science (Ibn Al-Haitham)				
Day 2	**Thursday**	**Morning Session**	**Date**	**Dec. 14 , 2017**
Session	**2bio1m**		**venue**	**Biology Dept. Seminar Hall**

Session Theme	**Biology**
Session Duration	**(10:00 – 11:30) am.**
Session Chair	**Prof. Dr. Hussain A. Dawod**
Rapporteur	**Assist. Prof. Dr. Hanadi S.Abdulsahib**

Time	Code	Title	Autho
10:00-10:12	226	Lag Phase And Biomass Determination Of Rhodococcus Pyridinivorans Gm3 For Phenol Degradation	**Mahammed E. Aldefiery**, Gopal Reddy
10:12-10:24	110	Teratogenic Effect Of Levetiracetam Drug On The Development Of The Kidney In Rat Embryo	**Lamyaa H. Alibrahimi**, Nahla A. Al-Bakri
10:24-10:36	47	Effect Of Tamoxifen Citrate Supplement To Smart Medium On Human Sperm Morphology During In Vitro Sperm Activation	**Noor K. Kadhim,** Mohammed B. Fakhrildin, Jabir Hameed
10:36-10:48	73	Seasonal Abundance Of Eggplant Leaf Miner Liriomyza Sativae (Diptera: Agromyzidae) In Plastichous	**Soolaf A.Kathiar**, Sawsan K. Flaih, Hind I. Al Khazraji, Safa K. Ismael
10:48-11:00	51	Assessment Of The Soluble Form Of Fas Ligand In Patients With Asthenozoospermia And Teratozoospermia.	**Ahmed H. Zwamel**, Anam R. Al-Salihi, Sabah N. Alwachi
11:00-11:12	154	Comparison Between Procalcitonin And Traditional Blood Biomarkers In Diagnosis Of Sepsis In Iraqi Wounded Soldiers	**Meroj A. Jasem,** Ali E. Mahmood, Ayser I.Mahmood, Mahmood M. Mustafa, Khalid M. Farhood

College Of Education For Pure Science (Ibn Al-Haitham)				
Day 2	**Wednesday**	**Afternoon Session**	**Date**	**Dec. 14 , 2017**
Session	**2bio1a**		**venue**	**Biology Dept. Seminar Hall**

Session Theme	**Biology**
Session Duration	**12:00 – 1:30 pm.**
Session Chair	**Prof. Dr. kadhim M. Al-Somaida'ee**
Rapporteur	**Lect. Dr. Areej A. Farmann**

Time	Code	Title	Author
12:00-12:12	1	Effects Sprayed Solution Of Salicylic Asid To Prevent Of Wilt Diseases	**Dina Y. Mohammed**
12:12-12:24	188	Influence Of Foliar Application Of Abscisic Acid (Aba) And Vitamin C Of Some Plant Hormones Of Pea Pisum Sativum L.	**Wifak A. Al-Kaisy**, Sahar F. Mahadi
12:24-12:36	216	Determination Of Progesterone, Prolactin, Estradiol, Zinc And Vitamin C In Female Iraqi Patients With Breast Cancer	Hazima M. Al-Abassi, Asmaa M. Almohaidi, **Amenah A. Almsawi**
12:36-12:48	27	Extraction And Preparation Of Pigments From Strelitzia Reginae Flowers As Sensitizer For Dye-Sensitized Solar Cell Application	**Mahmoud A. Alalwani**
12:48-1:00	109	The Study Of Bacterocin Of Pseudomonas Fluorescens And Citrus Limon Effects On Propionibacterium Acnes And Staphylococcus Epidermidis In Acne Patients	**Mais E. Ahmed**
1:00-1:12	224	Antimicrobial Activity Of Some Plants Extracts On Bacteria Isolated From Acne Vulgaris Patients	**Khetam H. Rasool**

Al- Mansour Melia Hotel				
Day 1	**Wednesday**	**Afternoon Session**	**Date**	**Dec. 13 , 2017**
Session	**1chem1a**		**venue**	**Meeting Hall**

Session Theme	**Chemistry**
Session Duration	**(1:00 – 2:30) pm.**
Session Chair	**Prof. Dr. Sarmad B. Dekran**
Rapporteur	**Assist. Prof. Dr. Dhafir T. Ajeel**

Time	Code	Title	Autho
1:00-1:12	15	Three locally clays as a surfaces for adsorption of cephalexin monohydrate from aqueous solution: thermodynamic and desorption equilibrium	**Saja S. Al-Taweel**, Sadoon A. Isa, Ramzi R. Al-Ani
1:12-1:24	184	Preparation and characterization of novel 4,5-dihydro-1H-tetrazol derivatives via azomethine compounds Reaction with sodium azide and evaluation the Biological Activity of them	**Obaid H. Abid**, Hiba M. Tawfeeq
1:24-1:36	293	Synthesis and antifungal activity against of Candida species for Some Heterocyclic Compounds new containing Schiff base or oxazepine or Indolinor imidazo groups and their spectral characterization	**Shaima I. Chyad**, Bari L. Mohammed, Siham Sh. AL-Salihi
1:36-1:48	229	Synthesis, spectroscopic characterization, and antibacterial evaluation of new Schiff bases bearing benzimidazole moiety	**Muayed A. Redayan**, Maha S. Hussein, Ashraf T. Lafta
1:48-2:00	343	Enhance the antioxidant activity For 2,4-di-*tert*-butylephenol by formation hytrocyclic ring at position six	**Raied M. Shakir,** Azhar Ariffin, Mahmood A. Abdulla
2:00-2:12	13	Partial purification of Leucine aminopeptidase (LAP) in Acromegalic Sample of Iraqi Patients	**Taghreed U. Mohammad**

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Day 2	**Thursday**	**Morning Session**	**Date**	**Dec. 14 , 2017**
Session	**2chem1m**		**venue**	**Prof. Dr. Fahad Ali Hall**

Session Theme	**Chemistry**
Session Duration	**(10:00 – 11:30) am.**
Session Chair	**Prof. Dr. Taqieddeen Abdulhadi**
Rapporteur	**Assist. Prof. Dr. Juman A. Nasir**

Time	Code	Title	Autho
10:00-10:12	291	The FSHR polymorphisms association with polycystic ovary syndrome in women of Erbil, Kurdistan in north of Iraq	**Aesha Sh. Sh. Baban**, Sabah H. Korsheed, Anas Y. Al Hayawi
10:12-10:24	250	Preparation Characterization and Electrical Study of New Polymeric Mixture (Consist of Three Polymers) Nanocomposites	**Entisar E. AL-Abodi**, A. Farouk
10:24-10:36	297	Indirect way for the assay of captopril drug in dosage forms using 1,10-phenanthroline as a selective spectrophotometric agent for Fe(II) via homemade CFIA /Merging zones technique	**Bushra B. Qassim,** Ahmed A. Alwan
10:36-10:48	135	Heavy metals characteristics of settled particles of streets dust from Diwaniyah City- Qadisiyah Governorate - Southern Iraq	**Moutaz A. Al-dabbas,** Khalid H. Mahdi, Raad M. Alkhafaji, Kawther H. Ohays
10:48-11:00	160	Fire retardancy assessment of polypropylene composite filed with nano clay prepared from Iraqi bentonite	**Watheq K. Salih**

College Of Education For Pure Science (Ibn Al-Haitham)				
Day 2	**Thursday**	**Morning Session**	**Date**	**Dec. 14 , 2017**
Session	**2chem2m**		**venue**	**Chemistry Dept. Postgraduate Hall**

Session Theme	**Chemistry**
Session Duration	**(10:00 – 11:30) am.**
Session Chair	**Prof. Dr. Jumbid H. Toma**
Rapporteur	**Assist. Prof. Dr. Taghreed U. Mohammed**

Time	Code	Title	Author
10:00-10:12	129	Synthesis, Characterization and thermal study of Some Transition metal Complexes derived from Quinoxaline-2,3-dione.	**Taghreed M. Musa,** Mahmoud N. Al-jibouri, Bayader F. Abass
10:12-10:24	123	Theoretical Treatment, Microwave Synthesis, Spectroscopic analysis of new Schiff bases derived from 4-Aminoantipyrene	**Ameena N. Seewan,** Zainab Y. Kadhim , Ahmed A Hadi
10:24-10:36	187	Cytotoxic effects of new synthesis heterocyclic derivatives of Amoxicillin on some cancer cell lines	**Muna S. AL-rawi,** Dhuha F. Hussein, Anwar F. Al-Taie, Mohammed M. Al-Halbosiy, Baraa Abdul-Hameed
10:36-10:48	333	Theoretical Investigation for the Effect of Fuel Quality on Gas Turbine Power Plants	**Omar A. khudair,** Khetam A. Abass, Noor S. Abed**,** Khalid H. Ali, Saad Abdulaziz, Ali Chlaib
10:48-11:00	332	Synthesis and spectral studies of heterocyclic azo dye complexes with some transition metals	**Amer J. Jarad,** Ismaeel Y.Majeed , Abaas O. Hussein
11:00-11:12	304	Spectrophotometric and Potentiometric Analysis of Calcichrome and its complex with Calcium ion .	**Ismail K. Al-Hitti**, Omur H. AlOubaydi, Saja S. AlSamarra'ay

Al- Mansour Melia Hotel				
Day 1	**Thursday**	**Afternoon Session**	**Date**	**Dec. 14 , 2017**
Session	**2chem1a**		**venue**	**Prof. Dr. Fahad Ali Hall**

Session Theme	**Chemistry**
Session Duration	**12:00 – 1:30 pm.**
Session Chair	**Prof. Dr. Ahmed Th. Numan**
Rapporteur	**Assist. Prof. Dr. Bushra H. Ali**

Time	Code	Title	Autho
12:00-12:12	296	Synthesis, Characterization and Antimicrobial activity of Mn(II), Co(II), Ni(II),Cu(II), Zn(II) and Cd(II) mixed ligand complexes Schiff base derived from Trimethoprim drug with 8-Hydroxy quinolone	Ahmed Th. Numan, **Eman M. Atiyah**
12:12-12:24	303	Synthesis, Characterization and the Corrosion Inhibition Study of Two Schiff Base Ligands Derived From Urea and Thiourea and Their Complexes with Cu(II) and Hg(II) Ions	**Wasan M. Alwan**
12:24-12:36	161	Synthesis, Spectral And Bacterial Studies Mixed Ligand Complexes of Schiff Base Derived from Methyldopa And Anthranilic Acid With Some Metal Ions	**Lekaa K. Abdul Karim**, Taghreed H. Al-Noor
12:36-12:48	196	Synthesis, Characterization and Antibacterial Activity of 1,4-di[aminomethylene carboxyl] phenylene (H_2L) Complexes Co(II), Cu (II), Zn(II) and Cd (II)	**Jassim S . Sultan,** Salah M. Fezea, Falih H .Mousa
12:48-1:00	227	Modified unzipping technique	**Basma H. Al-Tamimi**, Saad B. Farid, Fadhil A. Ghyad

Al- Mansour Melia Hotel				
Day 1	**Wednesday**	**Afternoon Session**	**Date**	**Dec. 13 , 2017**
Session	**1comp1a**		**venue**	**Cordoba 1 Hall**

Session Theme	**Computer Science**
Session Duration	**(1:00 –2:30) pm.**
Session Chair	**Assist. Prof. Dr. Alyaa K. Abdulhussain**
Rapporteur	**Assist. Prof. Dr. Abdullateef A. Hussain**

Time	Code	Title	Autho
1:00-1:12	263	Achieving Real-Time Tracking Mobile Wireless Sensors Using SE-KFA	Haider K. Hoomod, **Sadeem M. Al-Chalabi**
1:12-1:24	288	A New Heuristic Anonymization Technique for Privacy Preserved Datasets Publication on Cloud Computing	**Yousra A. S.Aldeen**
1:24-1:36	259	Hide for dynamic encryption text based on Corner point	**Firas A. Abdullatif**, Alaa A. Abdullatif, Amna al-saffar
1:36-1:48	269	Network Performance Analysis Based on Network Simulator NS-2	Maan Y. Anad, Naors Y. Anad, **Nawfal A. Zakar**
1:48-2:00	279	Evaluation Methodology between Globalization and Localization Features Approaches for Skin Cancer Lesions Classification	**Hussein M. Ahmed,** Razi J. Al-azawi, Abbas A. Abdulhameed
2:00-2:12	265	Analyzing Study of Path loss Propagation Models in Wireless Communications at 0.8 GHz	Haider K. Hoomod, Intisar Al-Mejibli, **Abbas I. Jabboory**

College Of Education For Pure Science (Ibn Al-Haitham)				
Day 2	**Thursday**	**Morning Session**	**Date**	**Dec. 14 , 2017**
Session	**2comp1m**		**venue**	**Computer Dept. Seminar Hall**

Session Theme	**Computer Science**
Session Duration	**(10:00 – 11:30) am.**
Session Chair	**Assist. Prof. Dr. Jeen J. Estifon**
Rapporteur	**Assist. Prof. Dr. Alaa A. Abdullatif**

Time	**Code**	**Title**	**Author**
10:00-10:12	264	Applying Self-Organizing Map and Modified Radial Based Neural Network for Clustering and Routing Optimal Path in Wireless Network	Haider K. Hoomod, **Tuka K. Jebur**
10:12-10:24	212	Hiding Text in Gray Image Using Mapping Technique	Ahmed A. Abbass, **Hussein L. Hussein**, Sinan A. Naji, Salam Al-augby, Jasim H. Lafta
10:24-10:36	80	secure server login by using third party and chaotic system	Firas A. Abdulatif , **Maan zuhiar**
10:36-10:48	312	Information Hiding In Digital Video Using DCT, DWT and CvT	**Wisam A. Shukur,** Wathiq N. Abdullah, Luheb K. Qurban
10:48-11:00	275	Performance of Case-Based Reasoning Retrieval Using Classification Based on Associations versus Jcolibri and Free CBR: A Further Validation Study	**Ahmed S. Aljuboori**, Frans Coenen, Mohammed Nsaif, David J. Parsons
11:00-11:12	244	Fuzzy-Estimation Control for Improvement Microwave Connection for Iraq Electrical Grid	Haider K. Hoomod, **Mohammed Radi**
11:12-11:24	299	Using Digital Watermarking To Secure Digital Documents	**Awad K. Hammoud**, Hatem N. Mohaisen, Qusay S. Shaker

College Of Education For Pure Science (Ibn Al-Haitham)				
Day 2	**Thursday**	**Afternoon Session**	**Date**	**Dec. 14 , 2017**
Session	**2comp1a**		**venue**	**Computer Dept. Seminar Hall**

Session Theme	**Computer Science**
Session Duration	**12:00 – 1:30 pm.**
Session Chair	**Prof. Dr. Ziyad T. Mustafa**
Rapporteur	**Assist. Prof. Dr. Ahmed N. Rasheed**

Time	Code	Title	Autho
12:00-12:12	245	Transmuted of Rayleigh Distribution with Estimation and Application on Noise Signal	**Suhad Ahmed,** Zainab Qasim
12:12-12:24	243	Fuzzy-Cellular Neural Network for Face Recognition HCI Authentication	Haider K. Hoomod, **Ahmed A. Ali**
12:24-12:36	104	Intelligent cloud computing security using genetic algorithm as a computational tools	**Mazin H. Razuky**
12:36-12:48	56	Comparison of Features Extraction Algorithms Used in the Diagnosis of Plant Diseases	**Mohammed A. Hussein**, Amel H. Abbas
12:48-1:00	330	Medical Image Security Using Modified Chaos-based Cryptography Approach	Methaq T. Gaata, **Shahad Th. Abdullatief**
1:00-1:12	157	New Secure E-mail System Based on Bio-Chaos Key Generation and Modified AES Algorithm	Haider K. Hoomod, **Arkan M. Radi**
1:12-1:24	274	Implementation of 4-way Superscalar Hash MIPS Processor Using FPGA	Safaa S. Omran, **Laith F. Jumma**

Al- Mansour Melia Hotel				
Day 1	**Wednesday**	**Afternoon Session**	**Date**	**Dec. 13 , 2017**
Session	**1math1a**		**Venue**	**Al-Khayam Hall**

Session Theme	**Mathematics**
Session Duration	**(1:00 – 2:30) pm.**
Session Chair	**Assist. Prof. Dr. Ali H. Nasir Alfayadh**
Rapporteur	**Assist. Prof. Dr. Majeed A. Wali**

Time	Code	Title	Author
1:00-1:12	7	On Direct Theorems For Best Polynomial Approximation	**Alaa A. Auad**, Rifaat S. AbdulJabbar
1:12-1:24	306	Generalized Differential Operator On Bistarlike And Biconvex Functions Associated By Quasi- Subordination	Abdul Rahman S. Juma, **Mohammed H. Saloomi**
1:24-1:36	116	Using Approximation Non-Bayesian Computation WITH Fuzzy Data TO Estimation Inverse Weibull Parameters AND Reliability Function	**Nadia H. Al-Noor**, Shurooq A.K. Al-Sultany
1:36-1:48	72	Finite Element Method with Piecewise Linear Function FOR Solving Nanoscale Inas⁄Gaas Quantum Ring Structures	Eman A. Hussain, Jamil A. Al-Hawasy, **Lamyaa H. Ali**
1:48-2:00	67	Classical Artinian Module And Related Topics	Majid M. Abed, **Ghazi F. AL-Sharqi**
2:00-2:12	253	Local Search Heuristic for Multi-CRITERIA Single Machine SCHEDULING Problem	Tariq S. Abdulrazaq, **Abeer O. Akram**

College Of Education For Pure Science (Ibn Al-Haitham)				
Day 2	**Thursday**	**Morning Session**	**Date**	**Dec. 14 , 2017**
Session	**2math1m**		**Venue**	**Prof. Oraibi AlZoba'ee Hall**

Session Theme	**Mathematics**
Session Duration	**(10:00 – 11:30) am.**
Session Chair	**Prof. Dr. Abdurahman H. Majeed**
Rapporteur	**Assist. Prof. Dr. Buthaina N. Shihab**

Time	Code	Title	Author
10:00-10:12	307	Coclosed Rickart Modules	Ghaleb A. Hmood
10:12-10:24	74	Strongly C_11-condition modules and strongly T_11-type modules	Inaam M. Ali Hadi, **Farhan D. Shyaa**
10:24-10:36	320	Application of Weyl Module in the Case of Two Rows	Haitham R. Hassan, **Neeran S. Jasim**
10:36-10:48	90	Weakly coretractable modules	**Shukur N. Alaeashi,** Inaam M. A. Hadi
10:48-11:00	66	Action of Groups on The Projective Plane Over The Field GF(41)	Emad B. AlZangana **Saja A. Joudah**
11:00-11:12	34	Essentially semismall Quasi-Dedekind module relative to a module	**Mukdad Q. Hussain**

College Of Education For Pure Science (Ibn Al-Haitham)				
Day 1	**Thuesday**	**Morning Session**	**Date**	**Dec. 14 , 2017**
Session	**2math2m**		**Venue**	**Central Laboratory Hall**

Session Theme	**Mathematics**
Session Duration	**(10:00 – 11:30) am.**
Session Chair	**Prof. Dr. Ra'ed K. Naji**
Rapporteur	**Prof. Abbas N. Salman**

Time	Code	Title	Author
10:00-10:12	82	Connecting On The Lattice Basis Reductions For Computing The Generators In The ISD Method	**Ruma K. Ajeena**, Sanaa K. Kamal
10:12-10:24	60	Steady State Radial Flow In Anisotropic And Homogenous In Confined Aquifers	**Alaa K. Jabber,** Luma N. M. Tawfiq
10:24-10:36	323	Solved Nth-Order Of Ordinary Differential Equations Using Lie Group	Eman A. Hussain, **Zainab M. Alwan**
10:36-10:48	94	Dynamic Of An SIR Model With Nonlinear Incidence Rate And Regress Of Treatment	**Saba N. Majeed**
10:48-11:00	319	Normalization Bernstein Basis For Solving Fractional Fredholm-Integro Differential Equation	**AbdulKhaleq O. AlJubory**, Shaymaa H. Salih
11:00-11:12	169	The Comparison Between The Bayes Estimator And The Maximum Likelihood Estimator Of The Reliability Function For Negative Exponential Distribution	Hazim M. Gorgees, **Bushra A. Ali,** Raghad I. Kathum

College Of Education For Pure Science (Ibn Al-Haitham)				
Day 1	**Thursday**	**Afternoon Session**	**Date**	**Dec. 14 , 2017**
Session	**2math1a**		**Venue**	**Prof. Oraibi AlZoba'ee Hall**

Session Theme	**Mathematics**
Session Duration	**12:00 – 1:30 pm.**
Session Chair	**Prof. Dr. Saad N. Ali**
Rapporteur	**Assist. Prof. Dr. Salwa S. Abd**

Time	Code	Title	Author
12:00-12:12	177	Fuzzy Fixed Point Theorem For Some Types Of Fuzzy Jungck Contractive Mappings In Hilbert Space	Buthainah A. Ahmed , **Manar F. Dheyab**
12:12-12:24	239	On Some Results Of Topological Groupoid	**Taghreed H. Majeed**
12:24-12:36	325	Common Fixed Points In Modular Spaces	Salwa S. Abed, **Karrar E. Abdulsada**
12:36-12:48	65	When M-Lindelof Sets Are Mx-Semi Closed	Haider J. Ali, **Marwa M. Dahham**
12:48-1:00	101	Analysis On The Cosets Of L-Convex Sets Subgroup	Nada M. Abbas, **Ruma K. Ajeena**
1:00-1:12	46	Quasi - Inner Product Spaces Of Quasi-Sobolev Spaces And Their Completeness	**Jawad K. Kalaf**

Al- Mansour Melia Hotel				
Day 1	**Wednesday**	**Afternoon Session**	**Date**	**Dec. 13 , 2017**
Session	**1phys1a**		**venue**	**Al-Hamraa Hall**

Session Theme	**Physics**
Session Duration	**(1:00 –2:30) pm.**
Session Chair	**Prof. Dr. Sameer A. Mekei**
Rapporteur	**Assist. Prof. Dr. Bushra K. Hassun**

Time	Code	Title	Autho
1:00-1:12	98	Fabrication And Study The Effect Of The Laser On The Properties Of The Compound **Tl2-Xhgxba2-Ysryca2cu3o10+Δ** Superconductor	Abdulkareem D. Ali, **Nihad A. Shafeek**
1:12-1:24	162	Theoretical Estimation Photons Flow Rate Production In Quark_Gluon Interacting At High Energies	**Hadi J. Al-Agealy**, Hayder H. Hussain, Saba M. Hussein
1:24-1:36	166	A New Relation Between Spiral Arm Pitch Angles (P) And The Momentum Parameter Of The Host Spiral Galaxies	**Ismaeel A. AlBaidhany**, Hayfa Gh. Rashid, Nadir F.Habubi, Sami S. Chiad , Nidhal N. Jando, Wasmaa Jabbar,
1:36-1:48	102	Wind Turbine Bearing Diagnostics Based On Vibration Monitoring	**Ali K. Resen**, Faleh H. Mahmood, Hussein T. Kadhim
1:48-2:00	301	The Enhancement Of UV Sensor Response By Zinc Oxide Nanorods / Reduced Graphene Oxide	**Ali A. A. Mohammed**, Suriani A. Bakar, Akram R. Jabur
2:00-2:12	324	Corrosion Protection Of Ductile Cast Iron Under Effect Of Harsh Environments	**Mustafa A. Rajab**, Hussein S. Hassan, Jasem Kh. Hamad

College Of Education For Pure Science (Ibn Al-Haitham)				
Day 2	**Thursday**	**Morning Session**	**Date**	**Dec. 14 , 2017**
Session	**2phys1m**		**venue**	**Prof. Salim Abdulhameed Hall**

Session Theme	**Physics**
Session Duration	**(10:00 – 11:30) am.**
Session Chair	**Prof. Dr. Kareem A. Jasim**
Rapporteur	**Assist. Prof. Dr. Abdulhameed R. Mahdi**

Time	Code	Ti	Autho
10:00-10:12	2	Improved Photoresponse of Porous Silicon Photodetectors By Embedding Titanium Oxide Nanoparticles	Hiba M. Ali, Sameer A. Mekei, **Ahmed N. Abd**
10:12-10:24	21	Fabrication And Characterization Study Of Vacuum Evaporated Znte/N-Si Heterojunction Solar Cell	**Bushra K. Hassun**, Bushra H. Hussein, Auday H. Shaban
10:24-10:36	22	Fabrication And Characterization Of AIAS/P-Si Heterojunction Solar Cell	**Hanan K. Hassun**, Auday H. Shaban, Ebtisam M. Salman
10:36-10:48	23	Effect Of Aluminum On Characterization Of Znte/N-Si Heterojunction Photodetector	Samir A. Maki, **Hanan K. Hassun**
10:48-11:00	331	Utilizing Laser-Induced Breakdown Spectroscopy Method to recognize chemical composition of low-carbon steel in NH3 (NO)4 material	**Nissan S. Oraibi**
11:00-11:12	96	Some Physical Properties Of Polyaniline Blends Films	**Tariq J. Alwan** , Abdulkhaliq S. Jabbar

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Day 2	**Thursday**	**Morning Session**	**Date**	**Dec. 14 , 2017**
Session	**2phys2m**		**venue**	**Physics Dept. Seminar Hall 2**

Session Theme	**Physics**
Session Duration	**(10:00 – 11:30) am.**
Session Chair	**Prof. Dr. Aleya A. Shihab**
Rapporteur	**Assist. Prof. Dr. Widad H. Jasim**

Time	**Code**	**Title**	**Autho**
10:00-10:12	81	Design And Simulation Of Surface Plasmon Resonance Sensors For Environmental Monitoring	**Aseel I. Mahmood** , Rawa Kh. Ibrahim, Zainab Kh. Ibrahim
10:12-10:24	69	Very High Q-Factor Based On G-Shaped Resonator Type Metamaterial Absorber	**Khalid S. Lateef**
10:24-10:36	93	Numerical Simulation Of Endlessly Single Mode Photonic Crystal Fibers (ESM-12-02)	**Nadia F. Muhammed**, Sudad S. Al-Bassam, Aseel Ibrahim, Shehab A. Kahdum
10:36-10:48	105	The Effect Of Replaced Recycled Glass On Thermal Conductivity Of Brittle Materials	Mustafa A. Mahmoud, Asmaa S. Khalil, **Ali H. Ressen**, Mohammed K. Jawad, Ban M. Mozahim
10:48-11:00	139	The Effect Of Fecl3 Additives On The Optical Parameters Of Pva	**Duha M. A. Latif** , Sami S. Chiad, Khalid H. Abass , Nadir F. Habubi , Muhssen S. Erhayief , Hadi Ahmed Hussin
11:00-11:12	158	Enhance Video Film Using Retnix Method	**Rasha A. Abtan**, Ali A. D. Al-Zuky, Anwar H. Al-Saleh, Haidar J. Mohamad

College Of Education For Pure Science (Ibn Al-Haitham)				
Day 2	**Thursday**	**Morning Session**	**Date**	**Dec. 14 , 2017**
Session	**2phys3m**		**venue**	**Physics Dept. Seminar Hall 1**

Session Theme	**Physics**
Session Duration	**(10:00 – 11:30) am.**
Session Chair	**Prof. Dr. Khalid H. Mahdi**
Rapporteur	**Assist. Prof. Dr. Aisar J. Ibraheem**

Time	Code	Title	Author
10:00-10:12	249	Characterization Of Zno Nanoparticles-PVDF Polymer Visible Photoconductive Detector On Silicon And Porous Silicon	**Asama N. Naje,** Omar Adnan
10:12-10:24	198	Synchronization Of Quantum Cascade Lasers With Negative Optoelectronic Feedback	**Hussein H. Waried**
10:24-10:36	173	Measuring Of Non-Linear Properties Of Spatial Light Modulator With Different Wavelengths	Samar Y. Aldabagh, Sudad S. Ahmed, Aseel I. Mahmood, **Farah G. Khalid**
10:36-10:48	88	Using SAFRAN Software to Assess Radiological Hazards from Dismantling of Tammuz-2 Reactor Core at Al-tuwaitha Nuclear Site	**Mezher A. Gatea**, Anwar A. Ahmed, Saad j. Kadhum, Hasan M. Ali, Abbas H. Muheisn
10:48-11:00	267	Theoretical Calculation Of The Electron Transport Parameters And Energy Distribution Function For CF3I With Noble Gases Mixtures Using Monte Carlo Simulation Program	**Enas A. Jawad**
11:00-11:12	29	Radiological Risk Assessments For Occupational Exposure At Fuel Fabrication Facility Al-Tuwaitha Site Baghdad – Iraq By Using Resrad Computer Code	**Zaidoon H. Ibrahim**, Sameera A. Ibrahim, Marwa K. Mohammed, Auday H. Shaban,

College Of Education For Pure Science (Ibn Al-Haitham)				
Day 2	**Thursday**	**Morning Session**	**Date**	**Dec. 14 , 2017**
Session	**2phys4m**		**venue**	**Chemistry Dept. Hall 4**

Session Theme	**Physics**
Session Duration	**(10:00 – 11:30) am.**
Session Chair	**Prof. Dr. Bashaier M. Saeed**
Rapporteur	**Assist. Prof. Dr. Mustafa K. Jasim**

Time	Code	Title	Author
10:00-10:12	225	Detection Of Increasing Of Tropospheric NO2 Over some Iraqi Cities By Using Satellite Data	**Saadiyah H. Halos**
10:12-10:24	4	OLIFE: Tight Binding Transmission Coefficient Calculation Code	**Zainelabideen Y. Mijbil**
10:24-10:36	68	Design Of Light Trapping Solar Cell System By Using Zemax Program	**Alaa B. Hasan**, Sabah A. Husain
10:36-10:48	70	Practical Study For The Properties Of Hueckel Edge Detection Operator	**Hameed M. Abduljabbar,** Amal J. hatem, Inbethaq M. A. AbdulAmeer
10:48-11:00	100	Chaotic Behavior Of The Rössler Model And Its Analysis By Using Bifurcations Of Limit Cycles And Chaotic Attractors	Kejeen M. Ibrahim, **Raied K. Jamal**, Falah Hasan
11:00-11:12	167	Theoretical Evaluations Of Probability Of Photons Yield Depending On Quantum Chromodynamics Theory	**Hadi J. Al-Agealy**, Mudhafar J. Sahib

College Of Education For Pure Science (Ibn Al-Haitham)				
Day 2	**Thursday**	**Afternoon Session**	**Date**	**Dec. 14 , 2017**
Session	**2phys1a**		**venue**	**Prof. Salim Abdulhameed Hall**

Session Theme	**Physics**
Session Duration	**12:00 –1:30 pm.**
Session Chair	**Prof. Dr. Raad H. Majeed**
Rapporteur	**Assist. Prof. Dr. Farouk I. Hussain**

Time	Code	Title	Author
12:00-12:12	138	Urban Energy And Dispersion Parameters Of Polyvinyl Alcohol Thin Films Doped With Fe	Nadir F. Habubi , **Khalid H. Abass** , Chiad S. Sami , Duha M. A. Latif , Jandow N. Nidhal , Ismaeel Al-Baidhany
12:12-12:24	182	The Role Of Tin Oxide Concentration On The Structural, Morphology And Optical Properties Of In2O3:Sno2 Thin Films	Bushra A. Hasan , **Rusul M. Abdallah**
12:24-12:36	327	Doping And Annealing Effect On Evaporation Of Zno Thin Films	**Auday H. Shaban**, Sameer A. Mekei , Shahd A. Hussain
12:36-12:48	210	Study Of The Effect Of Electromagnetic Fields On Indoor And Outdoor Radon Concentrations	**Lina M. Haider**, Najlaa R. Shareef, Hasssan H. Darwoysh, Hazim L. Mansour
12:48-1:00	215	Effect Of Nanoparticle Size Of Tio2 And Additive Materials To Improve Dye Sensitized Solar Cells Efficiency	**Falah H. Ali**, Dheyaa B. Alwan
1:00-1:12	8	Study Of Vegetation Cover Distribution Using DVI, PVI And WDVI Indices With 2D-Space Plot	**Taghreed A. H. Naji**

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Day 2	**Thursday**	**Afternoon Session**	**Date**	**Dec. 14 , 2017**
Session	**2phys2a**		**venue**	**Physics Dept. Seminar Hall 2**

Session Theme	**Physics**
Session Duration	**12:00 –1:30 pm.**
Session Chair	**Prof. Dr. Nadir F. Habubi**
Rapporteur	**Assist. Prof. Dr. Alaa B. Hasan**

Time	**Code**	**Title**	**Author**
12:00-12:12	172	Preparing And Study The Effects Of Composite Coatings In Protection Of Oil Pipes From The Risk Of Corrosion That Resulting From The Water Associated With Petroleum Products.	Abdulhameed R. Mahdi, **Mohammed A. Yaseen**
12:12-12:24	189	Recycling The Construction And Demolition Waste To Produce Polymer Concrete	Mohammad T. Hamza, Awham M. Hameed
12:24-12:36	214	Study The Effect Of Flow Rate On Some Physical Properties Of Different Polymeric Solutions	**Akram R. Jabur**, Manar A. Najim, Shereen A. Abdurahman
12:36-12:48	230	The Effect Of MWCNT On Some Physical Properties Of Epoxy Matrix	**Tagreed M. Alsaadi**, Suad H. Aleabi, Entisar E. Al-Obodi, Hadeel A. J. Abbas
12:48-1:00	235	Carbon Nanotubes /Conduct Polymer Nanocomposites For Electronic Devices	**Estabraq T. Abdullaha**, Abdulsattar G. Enadb, Mohammed G. Hamed
1:00-1:12	285	Mathematical Calculations Of Heat Transfer For The CNC Deposition Platform Based On Chemical Thermal Method	**Mohammed Sh. Essa,** Bahaa T. Chiad, Khalil A. Hussein

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Day 2	**Thursday**	**Afternoon Session**	**Date**	**Dec. 14 , 2017**
Session	**2phys3a**		**venue**	**Physics Dept. Seminar Hall 1**

Session Theme	**Physics**
Session Duration	**12:00 –1:30 pm.**
Session Chair	**Prof. Dr. Harith I. Jaafar**
Rapporteur	**Assist. Prof. Dr. Hameed M. Abduljabbar**

Time	Code	Title	Author
12:00-12:12	31	Computation Of Hazard Indices And Age Group Parameters Of Powder Milk Consumed In Iraq	**Hassan A. Ammer**, Nada F. Kadhim, Mahmood S. Karim
12:12-12:24	121	Arriving A Characteristic Formula To Deducing The Energy Of The Heaviest Particles Producing From The Controlled Thermonuclear Fusion Reactions	Raad H. Majeed, **Osamah N. Oudah**
12:24-12:36	181	Design Of Charged Particle Of Lens Using An Analytical Potential Formula	**Ali H. Hassan**, Mohammed J. Yaseen, Saadi R. Abbas
12:36-12:48	191	Interraction Of(O,Ar)Ions With (Prostat) As Approach Of Cancer Therapy	Bashair M. Saied, **Saad N. Yaacoub**
12:48-1:00	302	Radon Concentration And Dose Assessment In Well Water Samples From Karbala Governorate Of Iraq	**Iman T. Al-Alawy**, Aqeel A. Hasan
1:00-1:12	240	Effect Of Electrical Current Stimulation On Pseudomonas Aeruginosa Growth	Auns Q. Alneami, Eman Gh. Khalil, Rana A. Mohsien **Ali F. Abdulkareem**

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Day 2	**Thursday**	**Afternoon Session**	**Date**	**Dec. 14 , 2017**
Session	**2phys4a**		**venue**	**Chemistry Dept. Hall 4**

Session Theme	**Physics**
Session Duration	**12:00 –1:30 pm.**
Session Chair	**Prof. Dr. Hazim L. Mansour**
Rapporteur	**Assist. Prof. Dr. Hadi J. Mojebil**

Time	Code	Title	Author
12:00-12:12	124	Structural And Optical Properties Of Colloidal Inzno Nps Prepared By Laser Ablation In Liquid	**Maryam M. Khlewee**, Khawla S. Khashan
12:12-12:24	130	Multispectral And Panchromatic Used Enhancement Resolution And Study Effective Enhancement On Supervised Classification Landcover	**Salama S. Salman** , Wafaa A. Abbas
12:24-12:36	131	Hiding Information Using Different Lighting Color Images	**Ahlam Majead** , Salema Sultan, Rasha Awad
12:36-12:48	136	Enhance The Performance Of Liquid Crystal As An Optical Switch Doped With Cds Quantum Dots	Sudad S. Ahmed, **Rawa Kh. Ibrahim**, Kais Al-Naimee , Asama N. Naje, Omar A. Ibrahim, Khalood A. Majeed
12:48-1:00	137	Spatial And Temporal Analysis Of Mean Air Temperature Seasonally And Annually In Iraq For The Period 1980-2015	Yassen K. AlTimimi, **Aws A. AlKhudhairy**.
1:00-1:12	155	Preparation And Characterization Of Copper Oxide Nanoparticles Decorated Carbon Nanoparticles Using Laser Ablation In Liquid	Farah A. Abdulameer, Khawla S. khashan, Majid S. Jabir

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Posters
Of the Conference

Conference Posters

Al-Mansour Melia Hotel			
Day 1	Wednesday	**Date**	Dec. 13 , 2017
Session	Posters	**Theme**	Biology

Code	Title	Author
190	Irrigation water quality of Al-Gharraf Canal, south of Iraq	Salam H. Ewaid
255	Antimicrobial susceptibility of Enterococcus spp. Isolated from different clinical sources in Kirkuk provency	Hajir A. Shareef, Shara N. Abdullah
294	Antimicrobial Effect of Lactobacillus as a Probiotic Isolated from Yoghurt Products	Israa I. Khalil, Suhail J. Fadihl,
295	Determain kind and concentration of Heliotropium suaveolens, Plantago major and Silybum marianum plants ingredients and its effect on	A. J. Abdlrhmaan, I. A. Abdul Raheem , R. H. Latef

College Of Education For Pure Science (Ibn Al-Haitham)			
Day 2	Thursday	**Date**	Dec. 14 , 2017
Session	Posters	**Theme**	Biology

Code	Title	Author
54	Detection of tox A gene in Pseudomonas aeruginosa that isolates from different clinical cases by using PCR.	Rana M. A. Al-Shwaikh, Abbas F. Alornaaouti
134	Effect of sesame oil on lipid profile and liver enzymes of in male albino rats treated with Carbone tetrachloride (CCl4)	Rashaa F. Abdul-Lattif
186	First Record of Trichodina magna Van As and Basson, 1989 (Ciliophora: Trichodinidae) from Gills of Blue Tilapia Oreochromis aureus (Steindachner, 1864) in Iraq	Kefah N. Abdul-Ameer, Fatima Kh. Atwan
289	Investigate of the ability of Cronobacter sakazakii isolated from clinical samples of children under two years to induce swimming, swarming and	Luma A. H. Zwein, Tharieyt A. otlag, Mohamed mousa
316	Pathological and immunological study on infection with Escherichia coli in male BALB/c mice	Intisar H. Ali, Majid S. Jabir, Hanady S.A. Al-mgani, Ghassan M. Sulaiman , Ali H. Sadoon
321	The effect of Larinus maculates F. cocoon aqueous extract in some Immunological Aspects of male albino mice	Zainab Thamer Alasady; Hanady Salim Abd Alsaheb; Muna Shukri Mahmod Jwad

326	Seroprevalence of Toxoplasmosis Antibodies among Diabetes Mellitus Type 2 Patients and Assessment some Immunological Markers	Sarah A. Saeed , Israa K. Al-Aubaidi

Al-Mansour Melia Hotel			
Day 1	Wednesday	**Date**	Dec. 13 , 2017
Session	Posters	**Theme**	Chemistry

Code	Title	Author
293	Synthesis and antifungal activity against of Candida species for Some Heterocyclic Compounds new containing Schiff base or oxazepine or Indolinor imidazo groups and their spectral characterization	Shaima I. chyad, Bari L. Mohammed , Siham Sh. AL-Salihi
223	Cardiovascular Risk Assessement In Osteoporotic Patients Using Osteoprotegerin As A Reliable Predictive Biochemical Marker	Noora W. Rasheed, Ooroba J. Taresh
144	Use of Acidic Hydrolysis and Diazocoupling Reaction for Spectrophotometric Determination of Furosemide in Urine and pharmaceutical Formulation.	Hawraa Ali, Sumayha muhammed
283	New Indirect Spectrophotometric Method for Determination of Hypochlorite using Nile blue	Farha Kh. Omar

College Of Education For Pure Science (Ibn Al-Haitham)			
Day 2	Thursday	**Date**	Dec. 14 , 2017
Session	Posters	**Theme**	Mathematics

Code	Title	Author
6	Effect of radial magnetic field and heat transfer as well as mass transfer on peristaltic transport of Jeffrey fluid in curved channel.	Tamara Sh.Ahmed, Ahmed M. Abdulhadi
32	Characterizations of p-Hollow-Lifting Modules	Mukdad Q. Hussain, Marrwa A. Salih
43	On contractible j-spaces	Narjis. A. Dawood Suaad G. Gasim &
44	Estimate the Rate of Contamination in Soil for Displaced Persons Camp Using Interpolation Method	Luma N. M. Tawfiq, Israa N. Abood
55	Intuitionistic fuzzy n-fold KU-ideal of KU-algebra	Samy M. Mostafa, Fatema F. Kareem
63	Estimate the Effect of Rainwaters in Contaminated Soil by Using Simulink Technique	Luma N. M. Tawfiq, Mohammed A. Hassan
64	Estimate the Concentration of Heavy Metals in soil for Al- Zafaraniyah City By Using Neural Network	Farah. F. Ghazi
87	Different Estimation Methods for System Reliability in Multi-Components Stress-Strength Model: Exponentiated Weibull Distribution	Abbas N. Salman, Fatima Hadi

114	Comparison between Nonlinear Least Squares Method and Maximum A Posteriori Method	Mustafa M. Kazem
141	On Estimating the Survival Function for the Patients Suffer From the Lung Cancer Disease	Abbas N. Salman, Ibtehal H. Farhan, Maymona M. Ameen, Adel A. Hussein
150	The RSA Algorithm and Diffie-Hellman key exchange with A generated function of primes	Faez Ali AL-Maamori, Mazin S. Rasheed
151	Using simulation technique to overcome the multi-collinearity problem for estimating fuzzy linear regression parameters	Hazim M. Gorgees, Mariam M. Hilal
153	On Reliability Estimation for Exponential Distribution Based on Monte Carlo Simulation	Abbas N. Salman, Taha A. Taha
194	Bayesian Estimation of Reliability Burr Type XII Under Al-Bayyatis Suggest Loss Function with Numerical Solution	Amal A. Mohammed, Sudad K. Abraheem , Nadia J. Fezaa Al-Obedy
203	Strong Convergence of Iteration Processes for Infinite Family of General Extended Mappings	Zena H. Maibed
204	On Solving Modified Regularized Long Wave Equation Using Collocation Method	Hamad S., Luma N. M. Tawfiq, Zainor R. Yahya, Shazalina Mat Zin
217	Fibrewise Ij-Perfectbitopological Spaces	Yousif Y.Yousif , Liwaa. A. Hussain
218	〖λN〗_αC –Continuous And Contra λN〗_αC – Continuous Mappings In Topological spaces	Nadia M. A. Al- Tabatabai
300	Coprime Modules And Other Related Topics	Inaam.M. Ali, Rasha Ibrahim
308	Fibrewise Soft Ideal Topolgical Spaces	Yousif Y.Yousif, Mohammed A. Hussain
309	The Approximate Solution of Fractional Damped Burger's Equation and its Statistical Properties	Wurood R. Abd, Mahmood A. Shamran, Suaad N. Kadhim, Saad N. AL-Azzawi
314	Using the Ridge Regression procedures to Estimate the Multiple Linear Regression Coefficients	Hazim M. Gorgees, Fatimah A. Mahdi
318	Minimax Shrunken Technique for Estimate Burr X Distribution Shape Parameter	Abbas N. Salman, Maymona M. Ameen, Ahmed E. Abdul-Nabi

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Day 1	Wednesday	**Date**	Dec. 13 , 2017
Session	Posters	**Theme**	Physics

Code	Title	Author
234	Influence of Temperature on Nanosecond Pulse Amplification in Thulium Fiber Lasers	Ali Abdulfattah, Stefan Gausmann, Alex Sincore, Joshua Bradford, Nathan Bodnar, Justin Cook, Lawrence Shah, Martin richardson

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Day 2	Thursday	**Date**	Dec. 14 , 2017
Session	Posters	**Theme**	Physics

Code	Title	Author
3	The Effects of micro Aluminum fillers In Epoxy resin on the thermal conductivity	Kareem A. Jasim , Rihab Nasser Fadhil
11	The Effect of Oxygen Flow on the Transition Temperature of Hg0.75Pb0.25Sr2-yBayCa2Cu3O8+ δ Superconductors	Kareem A. Jasim, Raghad S. Al- Khafaji
30	Study The Electron Transport Coefficients for **A**, **O** and Their Mixtures By Using EEDF Program	Dhuha S. Abdulmajeed, Bushra J. Hussein, Mustafa K. Jassim
40	Experimental study of some shielding parameters for composite shields	Ahmed F. Mkhaiber, Abdulraheem Dheyaa
48	Antibacterial Activity Of ternary semiconductor compounds AgInSe2 Nanoparticles Synthesized by Simple Chemical Method	Alia A. Shehab, Suha. A. Fadaam, Ahmed N. Abd, Mohamed H. Mustafa
49	The partial substitution of copper with nickel oxide on the Structural and electrical properties of Hg$_{1-x}$Ni$_x$O$_{8+\delta}$ superconducting compound	Kareem A. Jasim, Laheeb A. Mohammed
79	Photoluminescence Spectra From The Direct Energy Gap of a-SiQDs	Nidhal M. Abdul-Ameer, Moafak C. Abdulrida, Shatha M. Abdul-Hakeem
91	Measure of Backscatter for small particles of atmosphere by lasers	Mariam M. Abud
112	Synthesis and characterization of porous silicon gas sensors	Roaa Adil abbas, Alwan M. Alwan, Zainab T. Abdulhamied
125	Theoretical discussion of Electron Transport rate constant at TCNQ / Ge and TiO2 System	Hadi J. Al-agealy, Mohsin A. Hassooni , Burhan R. Alshafaay, Ahmed M. Ashwiekh , Abbas K. Sadoon, Raad H. Majeed,

		Rawnaq Q. Ghadhban, Shatha H. Mahdi
156	Repeatability and Reversibility of the Humidity Sensor Based on Photonic Crystal Fiber Interferometer	Suaad S. Hindal, Hanan J. Taher
192	Estimation of geometrical shapes of mass-formed nuclei (A=102-178) from the calculation of deformation parameters for two elements (𝑺𝒏& 𝑻𝒆)	Sameera A. Ebrahiem, Haider A. Zghaier
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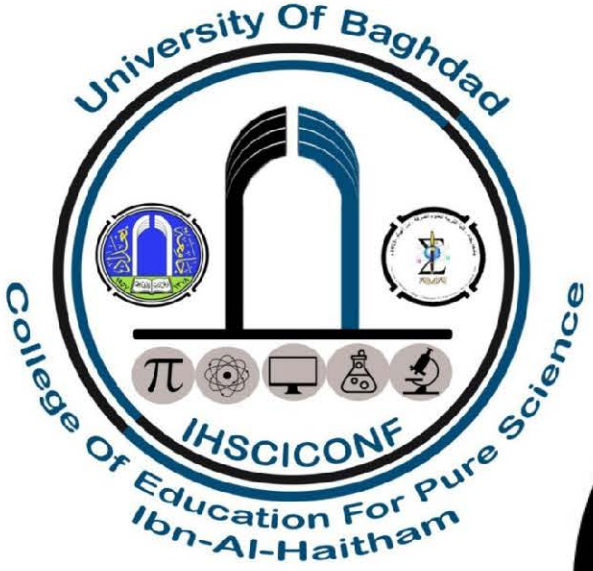

Papers
Of the Conference

IOP Publisher Volume

Scope	Biology	Paper No.	1	Contribution	Oral

Effects Sprayed Solution of Salicylic Acid to Prevent of Wilt Disease Caused by Fussarium oxysporium

Dina. Y. M. Yousif*

** Department of Biology., College of Science, Mustansiriyah University. Baghdad-Iraq.*

dr.dinayousif33@gmail.com , dr.dinayousif@uomustansiriyah.edu.iq

Abstract

The current search aimed to detective the effect of sprayed solution of salicylic acid on plant and leaves of sweet green pepper (Capsicum annuum) for control the pathogen Fussarium oxysporium compering with control plant and leaves.Results indicated that, the spray of salicylic acid at concentration 0.5 g/L is effecting the fungal infection through prevent transport fungus F. oxysporum to the neighboring green pepper plant. The number of dead green pepper plant after sprayed with solution of salicylic acid and only water they were (4, 6, and 3) (8, 9, and 10) respectively. While the experimental infection of green pepper leaves after inoculated the fungus as local spot by scorching small spots of these leaves with the aid of hot nail. These spots were then exposed to the 0.5 g/L aqueous solution salicylic acid before and after the inoculation of the fungus. The spray of salicylic acid before 24 and 48 hour prevent the development of disease and make a good protection of the mention leaves from infection with this fungus, the diameter of leaves lesion (1,1.5 cm) respectively . while the ability of fungus to grow after24 and 48 hour from salicylic acid treatment was markedly reduce as compared with control ,such treatment show slow growth of pathogen infect.

IOP Publisher Volume

Scope	Biology	Paper No.	25	Contribution	Oral

Preparation Characterization and Electrical Study of New Polymeric Mixture (Consist of Three Polymers) Nanocomposites

Entisar E. AL-Abodi, Azhar Farouk
Department of Chemistry, Collage of Education for Pure Science /Ibn Al-Haitham, University of Baghdad, Baghdad, Iraq .
email: entisaree2000@gmail.com

Abstract

By using hummers' method , graphene oxide (GO) was synthesized and by reducing it gave reduced graphene oxide (RGO). The polymeric blend contain three polymers; Poly Aniline(PANI), Poly Vinyl Acetate(PVAc),and Pecten(Pc) wich have been prepared at studied amount. The composites for above polymers with various concentrations of, graphene oxide (GO) and with reduced graphene oxide (RGO)were prepared, and than pour into films(chips) .The dielectric constant properties of chips were measured, which its point the electrical conductivity values for the prepared chips increase with increasing of frequency. As well, the electrical conductivity is research in terms of the Arrhenius plot, it is plotted against the reverse temperature for the prepared films at different applied frequencies.

IOP Publisher Volume

Scope	Biology	Paper No.	73	Contribution	Oral

Seasonal abundance of eggplant leafminer Liriomyza sativae (Blanchard, 1938) (Diptera, Agromyzidae) in plastic-house

S A Kathiar1, S K. Flaih2, H I Al-Khazraji2, S K Ismael2

1Biology Department, College of Science for Women, University of Baghdad

2Plant Protection Department, College of Agriculture, University of Baghdad

Abstract

The eggplant Solanum melongena L. crop is attacked by one of the most common pests which is the leafminer Liriomyza sativae (Blanchard, 1938); therefore, this investigation was conducted to study the seasonal abundance of the eggplant leafminer in eggplant Plastic-house. The results showed that the highest average of infested leaves was 6.67 leaf, the highest average of tunnels by leaf miner was 9.87 tunnels and the highest percent of infestation was recorded 30.5% in 23. April.2017. This study showed the parasitoid Diglyphus isaea (Walker, 1838) (Hymenoptera, Eulophidae) was recorded as a natural enemy to control the pest and the highest incidence of parasitism was 32.2 parasites on average in 16. April. 2017.

IOP Publisher Volume

Scope	Biology	Paper No.	109	Contribution	Oral

The study of Bacteriocin of Pseudomonas fluorescens and Citrus limon Effects against Propionibacterium acnes and Staphylococcus epidermidis in acne patients

Mais E. Ahmed
College of Science / University of Baghdad
mais.e.mahmood@gmail.com

Abstract

Research was carried out antibacterial of (Citrus limon) juice on Acnevulgaris. Samples were obtained from individuals having (Pimples) by swabbing their faces. Substances natural from plants are promising to treat disease cause Acnevulgaris ,the study in vitro biological activity of the juice, as well as bacterocin cultivated and fruits was investigated on two strain bacteria (Propionibacterium acnes, Staphylococcus epidermidis).The new antimicrobial (bacteriocin and Citrus juice) is on going search. This study used s juice at different concentrations at (20%, 30%, 40%, 60%, 80% and 100%) . The Bacteriocin produced from local P. fluorescens isolates from wound infection and majority of isolates were found to produce crude Bacteriocin were (P1and P2) in Pseudomonas agar at 37°C for 24 hrs . Crude Bacteriocin and Citrus limon juice against some pathogenic skin bacteria was find to be effective juice Citrus limon aganist S.epidermidis at 100% Concentrations with a range of inhibition zone (18) mm.The isolates of P. fluorescens (P2) was positive as producer of Bacteriocin with a wide inhibition growth against gram positive pathogenic bacteria with a range between (10-12) mm.

IOP Publisher Volume

Scope	Biology	Paper No.	170	Contribution	Oral

The Role Of Staphylococcus Haemolyticus In Men Infertility

Ghaed'a J. AL-Ghizzawi , Zahraa K. Jomaa
Department of Biology , Education College for Pure Science, Basra University
Corresponding authors email : warkajasem@yahoo.com

Abstract

A total of 80 samples of seminal fluid from infertile men who attending to admitted to clinics and laboratories in Omara city during the period from 2016/6/1 to 2016/12/1 , samples were subjected to semen analysis as recommended by WHO. The age of patients from 20 - 59 year. Another 25 semen sample were collected from fertilized men considered as control group. For this purpose seminal fluid were cultured on MacConkey agar , Blood agar, Chocolate agar. within the 80 samples recorded S. haemolyticus in 14 cases and the rate of infection 18% , all strains was diagnosed by Vitek system 2 Double .The highest percent (64%) record in age group (30 – 39).Primary infertility recorded 94% while 6% recorded for secondary infertility. Also, different species of bacterial isolates were identified in 32 cases by Vitek system 2 douple. The bacterial infection of men genital system affected on fertility .

IOP Publisher Volume

Scope	Biology	Paper No.	190	Contribution	Oral

Irrigation water quality of Al-Gharraf Canal, south of Iraq

Salam Hussein Ewaid
Technical Institute of Shatra, Southern Technical University, Iraq
salamalhelali@yahoo.com

Abstract

To evaluate the water quality of Al-Gharraf Canal south of Iraq for irrigation purpose, analysis of 12 physiochemical parameters of water samples by standard methods was carried out at five stations during the year 2016 (water temperature, pH, electrical conductivity, total dissolved solids, bicarbonate, chloride, calcium, magnesium, sulfate, nitrate, sodium, potassium).

Seven irrigation water quality indices were calculated like; sodium percentage (% Na), soluble sodium percentage (SSP), residual sodium bicarbonate (RSBC), Kelly's ratio (KR), permeability index (PI), magnesium adsorption ratio (MAR), and sodium adsorption ratio (SAR).

The results represented as diagrams (Piper, Stiff, Schoeller, Durov, Gibbs, and Wilcox) using AquaChem and RockWork hydro-chemical software.

Chemical analysis for canal water demonstrates the calcic chlorinated water type, the dominance of alkalis water, the major cations was in the order of: Na+ > Ca2+ > K+ > Mg2+ and major anions was: Cl- > SO42- > HCO3- > NO3-, the mean values of the irrigation water quality indices were (in meq/l) were; SAR (2.37), % Na (43.4), PI (%) (52.3), SSP (% (38.1), MAR (%) (34.5), KR (0.61), RSBC (-1.78).

The results indicate the suitability of canal water for irrigational purposes based on the calculated indices for the majority of crops under special management for salinity and permeability control.

The presentation of chemical analysis by diagrams and numbers makes understanding of complex water system too simpler and quicker. This study is a comprehensive assessment towards providing indicators and classification indices on irrigation water quality of the canal ecosystem, which will be the basis for future planning decisions on agricultural demand management measures and water quality monitoring to protect this principal water resource.

IOP Publisher Volume

Scope	Biology	Paper No.	226	Contribution	Oral

Lag phase and biomass determination of Rhodococcus pyridinivorans GM3 for degradation of phenol

M E J Al-Defiery1,1and G Reddy2

1 Environmental Research and studies Center, University of Babylon, Iraq.

2 Department of Microbiology, UCS, University of Osmania, India.

E-mail: al_defiery2004@yahoo.com

Abstract

Among various techniques available for removal of phenol, biodegradation is an eco-friendly and cost effective method. Thus, it is required to understand the process of biodegradation of phenol, such as investigate on lag phase and biomass concentration.

Phenol degrading bacteria were isolated from soil samples of industrial sites in enriched mineral salts medium (MSM) with phenol as a sole source of energy and carbon. One isolate of potential phenol degradation from consortium for phenol degrading studies was identified as Rhodococcus pyridinivorans GM3. Lag phase and biomass determination of R. pyridinivorans GM3 was studied with different phenol concentrations under pH 8.5 at temperature 32 Co and 200 rpm.

Microbial biomass was directly proportional to increasing phenol concentration between 1.0 to 2.0 g/L with a maximum dry biomass of 1.745 g/L was noted after complete degradation of 2.0 g/L phenol in 48 hours.

IOP Publisher Volume

Scope	Biology	Paper No.	295	Contribution	Oral

Determain kind and concentration of eliotropiumsuaveolens, Plantagomajorand Silybummarianum plants ingredients and its effect on some plant pathogenic fungi

A J Abdlrahmaan1, I A Abdul Raheem2, R H Latef 1

1 Department of Biology, College of Women Education, University of Tikrit, Iraq.
2 Department of Biology, College of Education, Tuzhurmato.

Abstract

A study was conducted on the biology laboratories-Tikrit University to determine the ingredients of three local plants Heliotropiumsuaveolens, Plantagomajor and Silybummarianum and effect its extracts on the growth of fungus Fusariumsolani, Fusariumoxysporum and Alternariaalternate. Results analysis by High performance Liquid Chromotographyte (HPLC) technique showed H. suaveolensplant contain alkaioidic compounds indicine 9.52%,supinine 3.95%,indicine-N-oxide 14.66%,heleurine 33.0%.heliotrine 31.88%and lidelofidine 6.95% and plantago major plant contain salysilic acid34.93% ,kampferol 4.55%,gentisic acid 2.72%,vanilic acid 1.67%,chlorogenetic acid 0.70%,coumaric acid 8.59%,ferulic acid 21.42% and aucubin 9.12% While S. marinum contain salichristinA 42.24%,salichristin B 14.89%, salidianin 30.23%,silybins A3.30%,silybins B 2.74%,isosilybins A 4.86% and isosilybins B 1.71%Extract 20 concentration of H.suavelones and P.major showed high inhibition reached100% While S. marinumshoed no effect on fungus growth.

IOP Publisher Volume

Scope	Biology	Paper No.	316	Contribution	Oral

Pathological And Immunological Study On Infection With Escherichia Coli In ale BALB/c mice

Intisar H Ali1, Majid S Jabir1, Hanady S A Al-Shmgani2* , Ghassan M. Sulaiman1 and Ali H. Sadoon1

1Biotechnology Division, Applied Science Department, University of Technology, Baghdad, Iraq

2 Biology Department, college of Education for Pure Sciences/Ibn al-Haitham, University of Baghdad, Iraq

Abstract

Escherichia coli bacteria consider as one of the common responsible for the frequency and severity of infections that it causes hospitalized patients. E. coli simultaneously carries a harmful side in which only a slight genetic recombination can bring about highly pathogenic strain that most frequently causes the scourge of bacterial infections worldwide including sepsis, neonatal meningitis, pneumonia, bacteremia, and traveler's diarrhea. This study was carried out to assessed Escherichia coli infection induced different Pathological and immunological. Following Escherichia coli isolation, identification and counting, the lethal dose (LD-50) was determined before infection. Twenty-two mice were used in this study for 21 days infection, the animals were sacrificed at 3, 6, 9, 12, 15, 18 and 21 days, and tissues of different tissue were collected, examined for bacterial infection. Bacteria and mice Immunization and ELISA were used to detect immunoglobulin G level in serum as well. For histological study, different infected organs were used. The results indicated that the LH50 was 1×109 cell; and all organs were infected after 3 days followed by decreased in infection level shown in brain at day 12, lung, kidney and intestine at day 15 and in liver, spleen and heart at day 21. Moreover, ELISA results revealed that concentration 1:200 of serum in positive and negative state and optimum concentration of Ag 1:40 dilution and compact dilution is 1:1000. In addition, diversity of histopathological alteration occurs in tissue on time-depended manner. This study concluded that the ability of activated E.coli to stimulate the intestinal secretory immune system of germ might result from a retardation of immunological maturity.

IOP Publisher Volume

Scope	Biology	Paper No.	326	Contribution	Oral

Seroprevalence occurrence of viral hepatitis and HIV among hemodialysis patients

Inass Mahmood Kamal1, Batool Mutar Mahdi2
1Al-Kindy Teaching Hospital
2Al-Kindy College of Medicine University of Baghdad
E-mail:abas_susan@yahoo.com

Abstract

Background: Patients with chronic renal failure (CRF) were on maintenance invasive haemodialysis (HD) procedure. This procedure by itself affects immunity of the patients and became more susceptible to viral infections.

Aim of the study: to investigate the occurrence of HBV, HCV and HIV infections in patients with hemodialysis.

Patients and methods: A retrospective study of 430 end-stage renal failure patients, referred to hemodialysis department at Al-Kindy Teaching Hospital, Baghdad-Iraq from Junuary-2015 to Junuary-2017. Patients were investigated for HBs-Ag using enzyme-labeled antigen test (Foresight-EIA-USA), HCV- Abs (IgG) specific immunoglobulin using a HCV enzyme-labeled antigen test (Foresight-EIA-USA)and anti HIV Abs (IgG) using enzyme-labeled antigen test (Foresight-EIA-USA).

Results: The frequency of HBV infection in the first year was not significant between males (1.11%) and females (0.00%)(P= 0.295). About HCV also there are no significant differences between males (12.63%) and females (9.31%)(P=0.347). After one year of follow up the frequencies of HBV and HCV were not significant between two sexes. Additionally, no any one of the patients had HIV infection.

Conclusions: This study brings a light on that HBV and HCV were having the same frequencies in both genders and lower occurrence with time. Furthermore, HIV was not detected in those patients.

IOP Publisher Volume

Scope	Chemistry	Paper No.	123	Contribution	Oral

Theoretical Treatment, Microwave Synthesis and Spectroscopic Analysis of New Schiff Bases Derived from 4-Aminoantipyrene

A N Seewan [1], Z Y Kadhim [2], A A Hadi [1]

[1]College of Basic Education/Al-Muthanna University, Samawa, Iraq

[2] College of Veterinary Medicine/Al-Muthanna University, Samawa, Iraq

Abstract

The new Schiff base was obtained compounds (I, II, III, IV) derived from 4-aminoantipyrene were synthesized by using microwave technique. And these Schiff bases were verified by some spectral data (IR, UV). HyperChem release 8.0 program was used to calculate the heat of formation ($\Delta H^0 f$) binding energy (ΔEb) and dipole moment (μ) for all compounds, also theoretical vibration frequencies and electronic spectra of compounds were calculated.

IOP Publisher Volume

Scope	Chemistry	Paper No.	187	Contribution	Oral

Cytotoxic effects of new synthesis heterocyclic derivatives of Amoxicillin on some cancer cell lines

M S Al-Rawi[1], D F Hussei[1], A F Al-Taie[1], M M Al-Halbosiy[2] and B A Hameed[2]

[1]Department of Chemistry , College of Education Ibn Al- Haitham, University of Baghdad, Iraq.

[2]Biotechnology Research Center –Al-Nahrain University, Iraq.

dr.m1967@yahoo.com

Abstract

A new Schiff base [I] was prepared by refluxing Amoxicillin trihydrate and 4-Hydroxy-3,5-dimethoxybenzaldehyde in aqueous methanol solution using glacial acetic acid as a catalyst. The new 1,3-oxazepine derivative [II] was obtained by Diels-Alder reaction of Schiff base [I] with phthalic anhydride in dry benzene. The reaction of Schiff base [I] with thioglycolic acid in dry benzene led to the formation of thiazolidin-4-one derivative [III]. While the imidazolidin-4-one [IV] derivative was produced by reacting the mentioned Schiff base [I] with glycine and triethylamine in ethanol for 9 hrs. Tetrazole derivative [V] was synthesized by refluxing Schiff base [I] with sodium azide in dimethylformamid DMF . The structure of synthesized compounds[I-V] was characterized by their melting points, elemental analysis CHN-S and by their spectral data; FTIR and ^{1}H NMR spectroscopy . *Two cancer cell lines include: (RD) human pelvic rhabdomyosarcoma and* (L_{20}B) the mice intestines carcinoma cell line (which expresses the genes for human cellular receptor for Polio viruses) *were used in this study*. The cytotoxic effect of different concentrations of all the synthesized compounds for 48 hrs was examined. All compounds except [IV] and [V] showed less than 50% inhibition for (L20B), while these compounds exhibit inhibition more than 50% inhibition for (RD).

IOP Publisher Volume

Scope	Chemistry	Paper No.	196	Contribution	Oral

Synthesis, Characterization and Antibacterial Activity of 1,4-di[aminomethylene carboxyl] phenylene (H_2L) and its Complexes Co(II), Cu (II), Zn(II) and Cd (II)

J S Sultan[1] , S M Fezea[1], F H Mousa[2]

[1] Department of chemistry, Collage of Education for pure Sciences, Ibn Al – Haitham, University of Baghdad, Iraq

[2] Ashur University Collage, Iraq

salahmf79@yahoo.com

Abstract

A binucleating tetradentate Schiff base ligand, 1,4- di[amino methylene carboxylic] phenylene (H_2L) and its forth new binuclear complexes [Co(II) , Cu(II) ,Zn(II) and Cd(II)] were prepared via reaction metal (II) chloride with ligand (H_2L) using 2:1 (M:L) in ethanol solvent. The new ligand (H_2L) and its complexes were characterized by elemental microanalysis (C.H.N), atomic absorption , chloride content, molar conductance's magnetic susceptibility ,FTIR UV- Vis spectral and, ^{1}H, ^{13} C- NMR (for H_2L). The antibacterial activity with bacteria activity with bacteria, *Staphylococcus aureus*, *Bacillus* and *Esccherichia Coli* were studied.

IOP Publisher Volume

Scope	Chemistry	Paper No.	250	Contribution	Oral

Preparation Characterization and Electrical Study of New Polymeric Mixture (Consist of Three Polymers) Nanocomposites

Entisar E. AL-Abodi, Azhar Farouk
Department of Chemistry, Collage of Education for Pure Science /Ibn Al-Haitham, University of Baghdad, Baghdad, Iraq .
email: entisaree2000@gmail.com

Abstract

By using hummers' method , graphene oxide (GO) was synthesized and by reducing it gave reduced graphene oxide (RGO). The polymeric blend contain three polymers; Poly Aniline(PANI), Poly Vinyl Acetate(PVAc),and Pecten(Pc) wich have been prepared at studied amount. The composites for above polymers with various concentrations of, graphene oxide (GO) and with reduced graphene oxide (RGO)were prepared, and than pour into films(chips) .The dielectric constant properties of chips were measured, which its point the electrical conductivity values for the prepared chips increase with increasing of frequency. As well, the electrical conductivity is research in terms of the Arrhenius plot, it is plotted against the reverse temperature for the prepared films at different applied frequencies.

IOP Publisher Volume

Scope	Chemistry	Paper No.	13	Contribution	Oral

Partial purification of Leucine aminopeptidase (LAP) in Acromegalic Sample of Iraqi Patients

Taghreed Uloom Mohammad
Department of Chemistry College of Education for Pure Science (IbnAL Haitham) University of Baghdad
tagreedaloom@gmailcom

Abstract

Acromagaly is a syndrome caused by increased growth hormone secretion from the frontal lobe of the pituitary gland A Leucine aminopeptidase (EC 34111) activity has been assayed in (30) patients sera samples(15 female and 15 males) with acromegaly age range between (3050) years and (30) sera of healthy as control group (16 femal and 14 male) age range between (3050) years The goal of the research was partial purified of enzyme from sera patients with acromegaly by dialysis gel filtration by using sephdex G50 and ion exchange chromatography by using DEAE cellulose A50 The results showed a single peak by using gel filtration and the activity was reached to 152 U/L Two isoenzymes were obtained by using ion exchange chromatography and the purity degree of isoenzymse (I II) were (125) and (128) fold respectively The current study found that the enzyme showed no significant difference between the healthy and the patients

IOP Publisher Volume

Scope	Chemistry	Paper No.	296	Contribution	Oral

Composition, Characterization and Antibacterial activity of Mn(II), Co(II),Ni(II), Cu(II) Zn(II) and Cd(II) mixed ligand complexes Schiff base derived from Trimethoprim with8-Hydroxy quinoline

Ahmed T Numan, Eman M Atiyah*, Rehab K. Al-Shemary**, Sahira S. Abd_Ulrazzaq

Department of Chemistry, College of Education for Pure Science, Ibn- Al-Haithem/ University of Baghdad, Baghdad ,Iraq

emanchem12@gmail.com ,drrehabalshemary@gmail.com***

Abstract

New Schiff base ligand 2-((4-amino-5-(3, 4, 5-trimethoxybenzyl) pyrimidin-2-ylimino) (phenyl)methyl)benzoic acid] = [HL] was synthesized using microwave irradiation trimethoprim and 2-benzoyl benzoic acid. Mixed ligand complexes of Mn((II), Co(II), Ni(II), Cu(II), Zn(II) and Cd(II) are reacted in ethanol with Schiff base ligand [HL] and 8-hydroxyquinoline [HQ] then reacted with metal salts in ethanol as a solvent in (1:1:1) ratio. The ligand [HL] is characterized by FTIR, UV-Vis, melting point, elemental microanalysis (C.H.N), 1H-NMR, 13C-NMR, and mass spectra. The mixed ligand complexes are characterized by infrared spectra, electronic spectra, (C.H.N), melting point, atomic absorption, molar conductance and magnetic moment measurements. These measurements indicate that the ligand [HL] coordinates with metal (II) ion in a tridentate manner through the oxygen and nitrogen atoms of the ligand, octahedral structures are suggested for these complexes. Antibacterial activity of the ligands [HL], [HQ] and their complexes are studied against (gram positive) and (gram negative) bacteria.

IOP Publisher Volume

Scope	Chemistry	Paper No.	303	Contribution	Oral

Synthesis, Characterization and the Corrosion Inhibition Study of Two Schiff Base Ligands Derived From Urea and Thiourea and Their Complexes with Cu(II) and Hg(II) Ions

Wasan Mohammed Alwan
Department of Chemistry, College of Education for Pure Science (Ibn Al–Haitham), University of Baghdad, Adhamiyah – Anter square – Baghdad – Iraq
Email : wwoo27@yahoo.com

Abstract

The research includes synthesis of [L1] and [L2] Schiff base ligands by the reaction of vanillin with urea and thiourea respectively in 2:1 mol ratio. The two ligands were reacted with CuII ion in 1:2 mol ratio and HgII ion in 1:1 mol ratio. The prepared compounds have been identified by FTIR, U.V-Vis, 1H-NMR (L1, L2 and HgII complex) spectroscopies, microelemental analysis (C.H.N.S), magnetic susceptibility measurements, atomic absorption, chloride content along with conductivity and melting point measurements. According to applied characterization methods, the proposed general formulas of CuII and HgII complexes were [Cu2LnCl4] and [HgLnCl]Cl, respectively, (where n= 1, 2). The ability of corrosion inhibition with two ligands and their cupper complexes has been studied in diluted hydrochloric acid media.

IOP Publisher Volume

Scope	Chemistry	Paper No.	229	Contribution	Oral

Synthesis, spectroscopic characterization, and antibacterial evaluation of new Schiff bases bearing benzimidazole moiety

Muayed Ahmed Redayan[1], Maha Salih Hussein[2], Ashraf Tark lafta[2]

1 Department of Chemistry, College of Education for pure sciences, Diyala University,Diyala, Iraq

2 Department of Chemistry, College of Education, Samarra University, Salahaldin, Iraq

mredayan@gmail.com

Abstract

The present work comprise synthesis of new derivatives for Schiff bases bearing benzimidazole ring. Compounds 1(a-d) were prepared by reaction of *o*-pheneylenediamine with a various of amino acids (glycine, alanine, phenyl alanine and tyrosine) in the presence 6N HCl to yielded derivatives of benzimidazole compounds containing free $-NH_2$ group. Then these compounds used to prepare different Schiff bases through reaction with various of aromatic aldehydes. The chemical structure of synthesized compounds were confirmed by FTIR,^{1}H,^{13}C-NMR, and ^{13}C-NMR dept135 spectroscopy. Some selected compounds were evaluated *in vitro* for their antibacterial activity against two types of Gram-positive bacteria namely (*Staphylococcous aureus*, *Bacillus subtilis*) and Gram-negative bacteria namely (*Pseudomonas aeruginosa*, *Escherichia coli*). Most of the results of the antibacterial activity of these compounds were good when compared with the standard antibiotic ampicillin and ciprofloxacin.

IOP Publisher Volume

Scope	Chemistry	Paper No.	160	Contribution	Oral

Fire retardancy assessment of polypropylene composite filed with nano clay prepared from Iraqi bentonite

Watheq Kareem Salih

Directorate of Materials Research – Ministry of Science & Technology- Baghdad – Iraq

Corresponding Email: alwathiq316@yahoo.com

Abstract

Fire retardants have an extraordinary importance because of their role in saving the people, property and reducing the damages and minimizing the dangers resulting from fires and burning of polymeric composites which are used in different civil and industrial fields. The work in this paper can be divided into two main stages. In first one nano-clay was manufactured from Iraqi bentonite and it was characterized using AFM, XRD, XRF, SEM, and BET. The AFM test showed the particle size of prepared nano clay was about 99.25 nm. In the second stage, polypropylene/nano clay composites at three low loading percents (0%,2%,4%,6%) were formulated via twin screw extruder. The fire retardancy tests included burning rate according to ASTM:D-635 and maximum flame height of flame according to ASTM:D-3014. Besides, the mechanical tests and thermal behavior of prepared samples were investigated. The results showed that (4%) of nano-clay had the maximum fire retardancy and while at (2%) loading, the maximum value of tensile strength and Yong modulus were obtained. The maximum heat of fusion was recorded for 6% nano clay sample. The final results assessment confirmed on the possibility of using low loadings of prepared nano clay to improve the fire retardancy, mechanical and thermal properties successfully.

IOP Publisher Volume

Scope	Chemistry	Paper No.	227	Contribution	Oral

Modified Unzipping Technique to Prepare Graphene Nano-Sheets

B H Al-Tamimi1, S B H Farid1 and F A Chyad
Department of Materials Engineering, University of Technology, Baghdad, Iraq

Abstract

Graphene nano-sheets have been prepared via unzipping approach of multiwall carbon nanotubes (MWCNTs). The method includes two chemical-steps, in which a multi-parameter oxidation step is performed to achieve unzipping the carbon nanotubes. Then, a reduction step is carried out to achieve the final graphene nano-sheets. In the oxidation step, the oxidant material was minimized and balanced with longer curing time. This modification is made in order to reduce the oxygen-functional groups at the ends of graphene basal planes, which reduce its electrical conductivity. In addition, a similar adjustment is achieved in the reduction step, i.e. the consumed chemicals is reduced which make the overall process more economic and eco-friendly. The prepared nano-sheets were characterized by atomic force microscopy, scanning electron microscopy, and Raman spectroscopy. The average thickness of the prepared graphene was about 5.23 nm.

IOP Publisher Volume

Scope	Chemistry	Paper No.	332	Contribution	Oral

Synthesis and spectral studies of heterocyclic azo dye complexes with some transition metals

***A J Jarad*[1] , *I Y Majeed*[1] *and A O Hussein*[2]**

[1]*Dept. of Chemistry College of Education for Pure Science -Ibn-Al-Haitham, University of Baghdad, Iraqi*

[2]*Ministry of education, Babylon Education, Iraqi*

Abstruct

6-(2-benzathiazolyl azo) -3,5-dimethylphenol was formed by grouping the 2-benzothiazole diazonium chloride with 3,5-dimethylphenol. Azo ligand(L) was resolved on the origin by ^{1}H and $^{13}CNMR$, FTIR and UV-Vis spectral analysis. Complexation of tridentate ligand (L) with Co^{2+}, Ni^{2+}, Cu^{2+} and Zn^{2+} in aqueous of ethyl alcohol with a 1:2 metal:ligand, and at ideal pH.. The formation of metal chelates are assigned using flame atomic absorption, FTIR and UV-Vis spectral analysis, other than conductivity and magnetic estates. The nature of the metal chelates were carried out by mole ratio and continuous variation mechanism, Beer's law followed the rate (0.0001 - 3×0.0001 M) concentration . High molar absorptivity for the complex solutions were observed. On the origin data an octahedral geometry were described for the metal chelates. Biological activity of the ready compounds were assayed.

IOP Publisher Volume

Scope	Chemistry	Paper No.	333	Contribution	Oral

Theoretical Investigation For The Effect of Fuel Quality on Gas Turbine Power Plants

Omar AbdulRazzak khudair[1], Khetam Alwan Abass[1] , Noor Saadi Abed[1], Khalid Hussain Ali[2], Saad AbdulAziz[2], Ali Chlaib Shaboot[2]

1Ministry of Science and technology

2Ministry of Electricity

omar_franco64@yahoo.com

Abstract

Gas turbine engine power generation is declined dramatically because of the reduction in thermodynamic parameters as a work of turbine, compressor ratio, compressor work, and air mass flow rate and fuel consumption. There are two main objectives of this work, the first is related with the effect of fuel kinds and their quality on the operation of fuel flow divider and its performance specifically gear pump displacement and fuel flow rate to the combustion chambers of gas power plant. AL-DORA gas turbine power plant 35MW was chosen to predict these effects on its performance MATLAB Software program is used to perform thermodynamic calculations. Fuel distribution stage before the process of combustion and as a result of the kind and its quality, chemical reaction will occur between the fuel and the parts of the gear system of each pump of the flow divider, which causes the erosion of the internal pump wall and the teeth of the gear system, thus hampering the pump operation in terms of fuel discharge.

The discharge of fuel form the eight external gates of flow divider is decreased and varied when going to the combustion chambers, so that, flow divider does not give reliable mass flow rate due to absence of accurate pressure in each of eight exit pipes.

The second objective deals with the stage of fuel combustion process inside the combustion chamber. A comparative study based upon performance parameters, such as specific fuel consumption for gas and gasoil and power generation. Fuel poor quality causes incomplete combustion and increased its consumption, so that combustion products are interacted with the surface of the turbine blades, causing the erosion and create surface roughness of the blade and disruption of gas flow. As a result of this situation, turbulence flow of these gases will increase causing the separation of gas boundary layers over the suction surface of the blade .Therefore the amount of extracted gas will decrease causing retreat work done by turbine, as a result decline of power and gas turbine power plant efficiency causing the drop in the level of electric generation. The fuel quality is found to be a strong function of specific fuel consumption and its effects on the power generation and the efficiency of the gas turbine power plants and hence, the cycle performance shifts towards favorable conditions.

IOP Publisher Volume

Scope	Chemistry	Paper No.	135	Contribution	Oral

Heavy metals characteristics of settled particles of streets dust from Diwaniyah City- Qadisiyah Governorate - Southern Iraq

Moutaz A. Al-Dabbas[1]*, Khalid H. Mahdi[2], Raad Al- Khafaji[2] and Kawthar H. Obayes[3]

[1] College of Science, University of Baghdad, Baghdad, Iraq,profaldabbas@yahoo.com*

[2]College of Education for pure sciences (Ibn Al-Haitham), University of Baghdad,raadalkhafagee@yahoo.com

[3]College of Education, University of Qadisiyah, Qadisiyah Governorate, Iraq.

Abstract

Road-side dust samples were collected from selected areas of Diwaniyah city-Qadisiyah Governorate - Southern Iraq. The heavy metals (Fe, Co, Ni ,Cu, Zn and Pb) in these streets dust samples were studied and used as indicator for pollution by using three of main indices (I- geo, CF, and PLI). Determination of heavy metal in the roadside dust is with XRD and XRF methods. I-geo for Co, Zn, Pb, and Ni in the studied sites shows relative values of class 1, which indicated the slightly polluted, while I-geo for Fe and Cu shows relative values of class 0, which indicated no pollution. The contamination factor for Co, Zn, Pb, and Ni classified as class 2, which indicate moderately contamination, while the contamination factor for Fe and Cu classified as class 1, which indicate low contamination. PLI values in the all of studied sites classified as class 2 (Deterioration on site quality) indicating local pollution, as well as denote perfection with (class 0) of no pollution. The distribution pattern of metals percentages was affected by gases emitted from transportation vehicles as well as the prevailing wind direction.

IOP Publisher Volume

Scope	Computer Science	Paper No.	104	Contribution	Oral

Intelligent cloud computing security using genetic algorithm as a computational tools

Mazin H Razuky AL- Shaikhly
Baghdad College of Economic Sciences University

Abstract

An essential change had occurred in the field of Information Technology which represented with cloud computing, cloud giving virtual assets by means of web yet awesome difficulties in the field of information security and security assurance. Currently main problem with cloud computing is how to improve privacy and security for cloud "cloud is critical security" .This paper attempts to solve cloud security by using intelligent system with genetic algorithm as wall to provide cloud data secure, all services provided by cloud must detect who receive and register it to create list of users (trusted or un-trusted) depend on behavior .The execution of present proposal has shown great outcome.

IOP Publisher Volume

Scope	Computer Science	Paper No.	157	Contribution	Oral

New Secure E-mail System Based on Bio-Chaos Key Generation and Modified AES Algorithm

Haider K Hoomod, A M Radi

1 Department of computer Science, college of Education, University Al-Mustansiriya

Drhjnew@gmail.com

Abstract

The E-mail messages exchanged between sender's Mailbox and recipient's Mailbox over the open systems and an insecure Networks. These messages may be vulnerable to eavesdropping and itself poses a real threat to the privacy and data integrity from unauthorized. The E-mail Security includes the following properties (Confidentiality, Authentication, Message integrity). We need a safe encryption algorithm to encrypt Email messages such as algorithm Advanced Encryption Standard (AES) or Data Encryption Standard DES as well as biometric recognition and chaotic system. The proposed E-mail system security is uses modified AES algorithm and use secret key-bio-chaos that consist of biometric (Fingerprint) and chaotic system (Lu and Lorenz). This modification makes the proposed system more sensitivity and randomness. The execution time for both encryption and decryption of proposed system is much less from original AES, in addition to being compatible with all Mail Server.

IOP Publisher Volume

Scope	Computer Science	Paper No.	245	Contribution	Oral

Transmuted of Rayleigh Distribution with Estimation and Application on Noise Signal

Suhad Ahmed1, Zainab Qasim2

1Ibn – Al – Haitham for Pure Science College, Baghdad University

2Ibn – Al – Haitham for Pure Science College, Baghdad University

1Suhadahmed12@gmail.com, 2zainab0qasim1@gmail.com

Abstract

This paper deals with transforming one parameter Rayleigh distribution, into transmuted probability distribution through introducing a new parameter (ƛ), since this studied distribution is necessary in representing signal data distribution and failure data model the value of this transmuted parameter $|\lambda| \leq 1$, is also estimated as well as the original parameter (Θ) by methods of moments and maximum likelihood using different sample size (n=25, 50, 75, 100) and comparing the results of estimation by statistical measure (mean square error, MSE).

IOP Publisher Volume

Scope	Computer Science	Paper No.	259	Contribution	Oral

Hiding Techniques for Dynamic Encryption Text based on Corner Point

Firas A. Abdullatif1, Alaa A. Abdullatif2, Amna al-Saffar3
123University of Baghdad\College of Education for pure science-Ibn Al-Haitham\computer science department
Firas.alobaedy@gmail.com, Alaa_3b@yahoo.com, Amnaalsafar1@yahoo.com

Abstract

Hiding technique for dynamic encryption text using encoding table and symmetric encryption method (AES algorithm) is presented in this paper. The encoding table is generated dynamically from MSB of the cover image points that used as the first phase of encryption. The Harris corner point algorithm is applied on cover image to generate the corner points which are used to generate dynamic AES key to second phase of text encryption. The embedded process in the LSB for the image pixels except the Harris corner points for more robust. Experimental results have demonstrated that the proposed scheme have embedding quality, error-free text recovery, and high value in PSNR.

IOP Publisher Volume

Scope	Computer Science	Paper No.	265	Contribution	Oral

Analyzing Study of Path loss Propagation Models in Wireless Communications at 0.8 GHz

Haider Kadhim Hoomod1, Intisar Al-Mejibli2 and Abbas Issa Jabboory3

1 Computer Science Dept., Al-Mustansiriyah University, Baghdad, Iraq

2 Informatics Systems Management Dept., University of Information Technology and Communication, Baghdad, Iraq

3Informatics Institute for Postgraduate Studies, Iraqi Commission for Computer & Informatics, Baghdad, Iraq

Corresponding address: drhjnew@gmail.com, it_abbas@yahoo.com

Abstract

The paths loss propagation model is an important tool in wireless network planning, allowing network planner to optimize the cell towers distribution and meet expected service level requirements. However, each type of path loss propagation model is designed to predict path loss in a particular environment that may be inaccurate in other different environment. In this research different propagation models (Hata Model, ICC-33 Model, Ericson Model and Coast-231 Model) have been analyzed and compared based on the measured data. The measured data represent signal strength of two cell towers placed in two different environments which obtained by a drive test of them. First one in AL-Habebea represents an urban environment (high-density region) and the second in AL-Hindea district represents a rural environment (low-density region) with operating frequency 0.8 GHz. The results of performing the analysis and comparison conclude that Hata model and Ericsson model shows small deviation from real measurements in urban environment and Hata model generally gives better prediction in the rural environment.

IOP Publisher Volume

Scope	Computer Science	Paper No.	279	Contribution	Oral

Evaluation Methodology between Globalization and Localization Features Approaches for Skin Cancer Lesions Classification

H M Ahmed1, R J Al-azawi2, A A Abdulhameed3

1Department of Computer Science, Iraqi Commission for Computers and Informatics/ Informatics Institute for postgraduate studies, Baghdad, Iraq.

2Department of Laser and Optoelectronics, University of Technology, Baghdad, Iraq.

3Department of Computer Science, University of Mustansiriyah, Baghdad, Iraq.

Hussein_gqi@yahoo.com

Abstract

Huge efforts have been put in the developing of diagnostic methods to skin cancer disease. In this paper, two different approaches have been addressed for detection the skin cancer in dermoscopy images. The first approach uses a global method that uses global features for classifying skin lesions, whereas the second approach uses a local method that uses local features for classifying skin lesions. The aim of this paper is selecting the best approach for skin lesion classification. The dataset has been used in this paper consist of 200 dermoscopy images from Pedro Hispano Hospital (PH2). The achieved results are; sensitivity about 96%, specificity about 100%, precision about 100%, and accuracy about 97% for globalization approach while, sensitivity about 100%, specificity about 100%, precision about 100%, and accuracy about 100% for Localization Approach, these results showed that the localization approach achieved acceptable accuracy and better than globalization approach for skin cancer lesions classification.

IOP Publisher Volume

Scope	Computer Science	Paper No.	80	Contribution	Oral

Secure Server Login by Using Third Party and Chaotic System

Firas A Abdulatif1, Maan zuhiar2

1Department of Computer Sciences, College of Education for pure science, Baghdad University, Baghdad, Iraq.

2Iraqi Commission for Computers & Informatics, Informatics Institute for Postgraduate, Iraq

Abstract

Server is popular among all companies and it used by most of them but due to the security threat on the server make this companies are concerned when using it so that in this paper we will design a secure system based on one time password and third parity authentication (smart phone). The proposed system make security to the login process of server by using one time password to authenticate person how have permission to login and third parity device (smart phone) as other level of security.

IOP Publisher Volume

Scope	Computer Science	Paper No.	212	Contribution	Oral

Hiding text in gray image using mapping technique

1 Hussein L. Hussein, 2Ahmed A. Abbass,, 3Sinan A. Naji, 4Salam Al-augby and 5Jasim H. Lafta

1 Ibn Al- Haitham College for education, Baghdad University, Baghdad, Iraq.
2 College education for girls, Kufa University, Najaf, Iraq.
3 College of Engineering, Univ. of Information Technology and Communications, Baghdad, Iraq.
4Faculty of Computer Science and Maths, Kufa University, Najaf, Iraq.
5Faculty of Informatics, Debrecen University, Debrecen, Hungary.

Abstract

In order to hide the significant and secret message inside a cover object, Steganography is considered as one of the most used technique because of its strength. This paper presents a new steganography technique that it is difficult to discover or break by a third party. The ASCII Mapping Technique (AMT) is used to create an encoded table by mapping the text message and matching some bits with that of the cover image. The system saves the character parts matching and the location of which part of the pixels. Then change the related flag from zero to one the for matched locations so that they cannot be used again to strength the technique and make it more secure. The proposed technique was tested and showed low computational cost with effective performance to be used for multi-purpose applications.

IOP Publisher Volume

Scope	Computer Science	Paper No.	243	Contribution	Oral

Fuzzy-cellular neural network for face recognition HCI Authentication

Haider K. Hoomod, Ahmed abd ali
Al-Mustansyriah University- Education college- computer science Dept.
Drhjnew@gmail.com

Abstract

Because of the rapid development of mobile devices technology, ease of use and interact with humans. May have found a mobile device most uses in our communications. Mobile devices can carry large amounts of personal and sensitive data, but often left not guaranteed (pin) locks are inconvenient to use and thus have seen low adoption while biometrics is more convenient and less susceptible to fraud and manipulation. Were propose in this paper authentication technique for using a mobile face recognition based on cellular neural networks [1] and fuzzy rules control. The good speed and get recognition rate from applied the proposed system in Android system. The images obtained in real time for 60 persons each person has 20 t0 60 different shot face images (about 3600 images), were the results for (FAR =0), (FRR =1.66%), (FER =1.66) and accuracy =98.34 Keyword: HCI, HCI authentication, Face recognition, Cellular neural network, Fuzzy.

IOP Publisher Volume

Scope	Computer Science	Paper No.	244	Contribution	Oral

Fuzzy-Estimation Control for Improvement Microwave Connection for Iraq Electrical Grid

Haider K. Hoomod And Mohammed Radi
Al-Mustansyriah University- Education college- computer science Dept.
Drhjnew@gmail.com

Abstract

The demand for broadband wireless services is increasing day by day (as internet or radio broadcast and TV etc.) for this reason and optimal exploiting for this bandwidth may be other reasons indeed be there is problem in the communication channels. it's necessary that exploiting the good part form this bandwidth. In this paper, we propose to use estimation technique for estimate channel availability in that moment and next one to know the error in the bandwidth channel for controlling the possibility data transferring through the channel. The proposed estimation based on the combination of the least Minimum square (LMS), Standard Kalman filter, and Modified Kalman filter. The error estimation in channel use as control parameter in fuzzy rules to adjusted the rate and size sending data through the network channel, and rearrangement the priorities of the buffered data (workstation control parameters, Texts, phone call, images, and camera video) for the worst cases of error in channel. The propose system is designed to management data communications through the channels connect among the Iraqi electrical grid stations. The proposed results show that the modified Kalman filter have a best result in time and noise estimation (0.1109 for 5% noise estimation to 0.3211 for 90% noise estimation) and the packets loss rate is reduced with ratio from (35% to 385%).Keyword: error estimate channel, least square, minimum mean square error , fuzzy logic .

IOP Publisher Volume

Scope	Computer Science	Paper No.	312	Contribution	Oral

Information Hiding In Digital Video Using DCT, DWT and CvT

Wisam Abed Shukur*,Wathiq Najah Abdullah **, Luheb Kareem Qurban ***
** University Of Baghdad, College of Education For Pure Sciences/Ibn Al-Haitham, Computer Science Dept., Iraq. wisam_shukur@yahoo.com, wisam.a.s@ihcoedu.uobaghdad.edu.iq*
*** University Of Baghdad, College of Education For Pure Sciences/Ibn Al-Haitham, Computer Science Dept., Iraq.*
wathiq79@gmail.com

Abstract

The type of video that used in this proposed hiding a secret information technique is .AVI; the proposed technique of a data hiding to embed a secret information into video frames by using Discrete Cosine Transform (DCT), Discrete Wavelet Transform (DWT) and Curvelet Transform (CvT). An individual pixel consists of three color components (RGB), the secret information is embedded in Red (R) color channel. On the receiver side, the secret information is extracted from received video. After extracting secret information, robustness of proposed hiding a secret information technique is measured and obtained by computing the degradation of the extracted secret information by comparing it with the original secret information via calculating the Normalized cross Correlation (NC). The experiments shows the error ratio of the proposed technique is (8%) while accuracy ratio is (92%) when the Curvelet Transform (CvT) is used, but compared with Discrete Wavelet Transform (DWT) and Discrete Cosine Transform (DCT), the error rates are 11% and 14% respectively, while the accuracy ratios are (89%) and (86%) respectively. So, the experiments shows the Poisson noise gives better results than other types of noises, while the speckle noise gives worst results compared with other types of noises. The proposed technique has been established by using MATLAB R2016a programming language.

IOP Publisher Volume

Scope	Computer Science	Paper No.	330	Contribution	Oral

Medical image security using modified chaos-based cryptography approach

Methaq Talib Gatta and Shahad Thamear Abd Al-latief
Computer Science Department, University of Mustansiriya, Baghdad, Iraq

Abstract

The progressive development in telecommunication and networking technologies have led to the increased popularity of telemedicine usage which involve storage and transfer of medical images and related information so security concern is emerged. This paper presents a method to provide the security to the medical images since its play a major role in people healthcare organizations. The main idea in this work based on the chaotic sequence in order to provide efficient encryption method that allows reconstructing the original image from the encrypted image with high quality and minimum distortion in its content and doesn't effect in human treatment and diagnosing. Experimental results prove the efficiency of the proposed method using some of statistical measures and robust correlation between original image and decrypted image.

IOP Publisher Volume

Scope	Computer Science	Paper No.	274	Contribution	Oral

Implementation of 4-way Superscalar Hash MIPS Processor Using FPGA

Safaa Sahib Omran1, Laith Fouad Jumma2

1 College of Electrical and Electronic Techniques, Computer Engineering Techniques

2 College of Electrical and Electronic Techniques, Computer Engineering Techniques

1 Omran_safaa@ymail.com , 2Laith1993@gmail.com

Abstract

Due to the quick advancements in the personal communications systems and wireless communications, giving data security has turned into a more essential subject. This security idea turns into a more confounded subject when next-generation system requirements and constant calculation speed are considered in real-time. Hash functions are among the most essential cryptographic primitives and utilized as a part of the many fields of signature authentication and communication integrity. These functions are utilized to acquire a settled size unique fingerprint or hash value of an arbitrary length of message. In this paper, Secure Hash Algorithms (SHA) of types SHA-1, SHA-2 (SHA-224, SHA-256) and SHA-3 (BLAKE) are implemented on Field-Programmable Gate Array (FPGA) in a processor structure. The design is described and implemented using a hardware description language, namely VHSIC "Very High Speed Integrated Circuit" Hardware Description Language (VHDL). Since the logical operation of the hash types of (SHA-1, SHA-224, SHA-256 and SHA-3) are 32-bits, so a Superscalar Hash Microprocessor without Interlocked Pipelines (MIPS) processor are designed with only few instructions that were required in invoking the desired Hash algorithms, when the four types of hash algorithms executed sequentially using the designed processor, the total time required equal to approximately 342 us, with a throughput of 4.8 Mbps while the required to execute the same four hash algorithms using the designed four-way superscalar is reduced to 237 us with improved the throughput to 5.1 Mbps.

IOP Publisher Volume

Scope	Computer Science	Paper No.	88	Contribution	Oral

Using SAFRAN Software to Assess Radiological Hazards from Dismantling of Tammuz-2 Reactor Core at Al-tuwaitha Nuclear Site

Mezher Abed Gatea[1], Anwar A Ahmed, Saad jundee kadhum, Hasan Mohammed Ali and Abbas Hussein Muheisn

1Iraqi Decommissioning Directorate, Ministry of Science and Technology, Iraq

1Corresponding Author, Chief Engineer, e-mail: mizher.abed@gmail.com

Abstract

The Safety Assessment Framework (SAFRAN) software has implemented here for radiological safety analysis; to verify that the dose acceptance criteria and safety goals are met with a high degree of confidence for dismantling of Tammuz-2 reactor core at Al-tuwaitha nuclear site. The activities characterizing, dismantling and packaging were practiced to manage the generated radioactive waste. Dose to the worker was considered an endpoint-scenario while dose to the public has neglected due to that Tammuz-2 facility is located in a restricted zone and 30m berm surrounded Al-tuwaitha site. Safety assessment for dismantling worker endpoint-scenario based on maximum external dose at component position level in the reactor pool and internal dose via airborne activity while, for characterizing and packaging worker endpoints scenarios have been done via external dose only because no evidence for airborne radioactivity hazards outside the reactor pool. The in-situ measurements approved that reactor core components are radiologically activated by Co-60 radioisotope. SAFRAN results showed that the maximum received dose for workers are (1.85, 0.64 and 1.3mSv/y) for activities dismantling, characterizing and packaging of reactor core components respectively. Hence, the radiological hazards remain below the low level hazard and within the acceptable annual dose for workers in radiation field .

IOP Publisher Volume

Scope	Computer Science	Paper No.	263	Contribution	Oral

Achieving Real-Time Tracking Mobile Wireless Sensors Using SE-KFA

Dr. Haider Kadhim Hoomod1, Sadeem Marouf M. Al-Chalabi2
1 Computer Science Dept., Al-Mustansiriyah University, Baghdad, Iraq
2Informatics Institute for Postgraduate Studies, Iraqi Commission for Computer & Informatics, Baghdad, Iraq
Corresponding address drhjnew@gmail.com, sadeemalchalabi@gmail.com

Abstract

Nowadays, Real-Time Achievement is very important in different fields, like: Auto transport control, some medical applications, celestial body tracking, controlling agent movements, detections and monitoring, etc. This can be tested by different kinds of detection devices, which named "sensors" as such as: infrared sensors, ultrasonic sensor, radars in general, laser light sensor, and so like. Ultrasonic Sensor is the most fundamental one and it has great impact and challenges comparing with others especially when navigating (as an agent). In this paper, concerning to the ultrasonic sensor, sensor(s) detecting and delimitation by themselves then navigate inside a limited area to estimating Real-Time using Speed Equation with Kalman Filter Algorithm as an intelligent estimation algorithm. Then trying to calculate the error comparing to the factual rate of tracking. This paper used Ultrasonic Sensor HC-SR04 with Arduino-UNO as Microcontroller.

IOP Publisher Volume

Scope	Computer Science	Paper No.	264	Contribution	Oral

Applying self-organizing map and modified radial based neural network for clustering and routing optimal path in wireless network

Haider K Hoomod and Tuka Kareem Jebur
Al-Mustansariyhi University-Education College-Computer Science Dept. Iraq . Baghdad
Drhjnew@gmail.com , Tukakareem9@gmail.com

Abstract

Mobile ad hoc networks (MANETs) play a critical role in today's wireless ad hoc network research and consist of active nodes that can be in motion freely. Because it consider very important problem in this network, we suggested proposed method based on modified radial basis function networks RBFN and Self-Organizing Map SOM. These networks can be improved by the use of clusters because of huge congestion in the whole network. In such a system, the performance of MANET is improved by splitting the whole network into various clusters using SOM. The performance of clustering is improved by the cluster head selection and number of clusters. Modified Radial Based Neural Network is very simple, adaptable and efficient method to increase the life time of nodes, packet delivery ratio and the throughput of the network will increase and connection become more useful because the optimal path has the best parameters from other paths including the best bitrate and best life link with minimum delays. Proposed routing algorithm depends on the group of factors and parameters to select the path between two points in the wireless network. The SOM clustering average time (1-10 msec for stall nodes) and (8-75 msec for mobile nodes). While the routing time range (92-510 msec).The proposed system is faster than the Dijkstra by 150-300%, and faster from the RBFNN (without modify) by 145-180%.

IOP Publisher Volume

Scope	Computer Science	Paper No.	104	Contribution	Oral

Intelligent cloud computing security using genetic algorithm as a computational tools

Mazin H Razuky AL- Shaikhly
Baghdad College of Economic Sciences University

Abstract

An essential change had occurred in the field of Information Technology which represented with cloud computing, cloud giving virtual assets by means of web yet awesome difficulties in the field of information security and security assurance. Currently main problem with cloud computing is how to improve privacy and security for cloud "cloud is critical security" .This paper attempts to solve cloud security by using intelligent system with genetic algorithm as wall to provide cloud data secure, all services provided by cloud must detect who receive and register it to create list of users (trusted or un-trusted) depend on behavior .The execution of present proposal has shown great outcome.

IOP Publisher Volume

Scope	Mathematics	Paper No.	194	Contribution	Oral

Bayesian Estimation of Reliability Burr Type XII Under Al-Bayyatis' Suggest Loss Function with Numerical Solution

Amal A. Mohammed 1,2, Sudad K. Abraheem3,4 and Nadia J. Fezaa Al-Obedy 5,6
Department of ways & Transportation, College of Engineering, Mustansiriyah University, Baghdad, Iraq.
Department of Mathematics, College of Science, Mustansiriyah University, Baghdad, Iraq.
Department of Mathematics, College of Science, Mustansiriyah University, Baghdad, Iraq.
dr.amal70@uomustansiriyah.edu.iq and orcid.org/0000-0003-4832-4197.
sudad1968@uomustansiriyah.edu.iq and orcid.org/0000-0002-2629-9093.
abualhassan76@uomustansiriyah.edu.iq and orcid.org/0000-0003-1134-4979.

Abstract

In this paper is considered with Burr type XII distribution. The maximum likelihood, Bayes methods of estimation are used for estimating the unknown scale parameter (α). Al-Bayyatis' loss function and suggest loss function are used to find the reliability with the least loss. So the reliability function is expanded in terms of a set of power function. For this performance, the MatLab (ver.9) is used in computations and some examples are given.

IOP Publisher Volume

Scope	Mathematics	Paper No.	203	Contribution	Oral

Strong Convergence of Iteration Processes for Infinite Family of General Extended Mappings

Zena Hussein Maibed
Department of Mathematic, College of Education for Pure Science/ Ibn Al-Haitham, University of Baghdad
mrs_ zena.hussein @yahoo.com

Abstract

The aim of this paper, we introduce a concept of general extended mapping which is independent of nonexpansive mapping and give an iteration process of families of quasi nonexpansive and of general extended mappings. Also, the existence of common fixed point are studied for these process in the Hilbert spaces.

IOP Publisher Volume

Scope	Mathematics	Paper No.	300	Contribution	Oral

COPRIME MODULES AND OTHER RELATED TOPICS

A.M.Inaam and K.I. Rasha
Department of mathematics,college of education
Ibn-Al-Haitham , university of Baghdad.

Abstract

Let R be a commutative ring with unity and let M be a unitary R-module. In this paper we study the relationships between coprime modules and other kinds of modules.

IOP Publisher Volume

Scope	Mathematics	Paper No.	65	Contribution	Oral

When m-lindelof sets are mx-semi closed

Haider Jebur Ali, Marwa Makki Dahham
Department of Mathematics, College of Science, Mustansiriyah University, Baghdad, Iraqi
haiderali89@yahoo.com, marwamakki111@gmail.com

Abstract

This paper is devoted to introduce new concepts so called m-L(sc)-spaces. Several theorems related to these concepts are proved, further properties are studied as well as the relationships between these concepts with another types of m-L(sc)-spaces are investigated.

IOP Publisher Volume

Scope	Mathematics	Paper No.	101	Contribution	Oral

Mathematical analysis on the cosets of subgroup in the group of E-convex sets

Nada Mohammed Abbas1 and Ruma Kareem K. Ajeena2

1,2Mathematics Department, Education College for Pure Sciences, University of Babylon, Iraq

nadaalsafar333@gmail.com and ruma.usm@gmail.com

Abstract

In this work, analyzing the cosets of the subgroup in the group of L- convex sets is presented as a new and powerful tool in the topics of the convex analysis and abstract algebra. On L- convex sets, the properties of these cosets are proved mathematically. Most important theorem on a finite group of L- convex sets theory which is the Lagrange's Theorem has been proved. As well as, the mathematical proof of the quotient group of L- convex sets is presented.

IOP Publisher Volume

Scope	Mathematics	Paper No.	306	Contribution	Oral

Generalized Differential Operator on Bistarlike and Biconvex Functions Associated By Quasi-Subordination

Abdul Rahman S. Juma1, Mohammed H. Saloomi 2
1Department of Mathematics,University of Anbar,Ramadi,Iraq.
2 Department of Mathematics,University of Baghdad,Baghdad,Iraq.
dr_juma@hotmail.com , mohammed_h1963@yahoo.com

Abstract

In this paper, the generalized differential operator is applied to derive some subclasses of function class $\mathtt{s}$ of bi-univalent functions defined in unit disk $\mathfrak{U}$. We estimate the bounds of the coefficients a_2 and a_3 for all functions which belong to the derived subclasses of $\mathtt{s}$.

IOP Publisher Volume

Scope	Mathematics	Paper No.	34	Contribution	Oral

Essentially semismall Quasi-Dedekind module relative to a module

Mukdad Q Hussain

Department of Computer Sciences, College of Education for pure science, Diyala University, Diyala, Iraq.

Abstract

Let R be associative ring with identity and M be a unitary R-module. In this paper study the direct summand of essentially semismall quasi-Dedekind module and prove that the direct sum of essentially semismall quasi-Dedekind modules need not be essentially semismall quasi-Dedekind and give the definition of essentially semismall quasi-Dedekind relative to a module with some examples, also give some of their basic properties and some examples that illustrate these properties.

IOP Publisher Volume

Scope	Mathematics	Paper No.	309	Contribution	Oral

The Approximate Solution of Fractional Damped Burger's Equation and its Statistical Properties

Wurood R. Abd AL- Hussein1, Mahmood A, Shamran2 Suaad N. Kadhim3 and Saad N. AL-Azzawi2

1Al-Isra'a University College – Baghdad - IRAQ

2Dept. of Math., College of Science for Women, Univ. of Baghdad

3Dept. of Math., College of Science, Univ. of Baghdad

wowomath91@yahoo.com , Mahmood_areiby@yahoo.com , Saad_naji2007@yahoo.com

Abstract

The aim of this paper is to extend the variational iteration method(VIM) to find the approximate solution of fractional damped Burger's equation and finding its statistical concepts.

IOP Publisher Volume

Scope	Mathematics	Paper No.	314	Contribution	Oral

Using the Ridge Regression Procedures to Estimate the Multiple Linear Regression Coefficients

Hazim Mansoor Gorgees 1,Fatimah Assim Mahdi2
1Baghdad University, College of Pure Science,Ibn Al-Haithem
2Baghdad University, College of Pure Science,Ibn Al-Haithem
fatima_assim92@yahoo.com, hazim5656@yahoo.com

Abstract

This article concerns with comparing the performance of different types of ordinary ridge regression estimators that have been already proposed to estimate the regression parameters when the near exact linear relationships among the explanatory variables is presented. For this situations we employ the data obtained from tagi gas filling company during the period (2008-2010). The main result we reached is that the method based on the condition number performs better than other methods since it has smaller mean square error (MSE) than the other stated methods.

IOP Publisher Volume

Scope	Mathematics	Paper No.	308	Contribution	Oral

Fibrewise soft ideal topological space

Yousif Y Yousif *, Mohammed A H Ghafel**
Department of Mathematics, College of Education for Pure Science (Ibn Al-Haitham), Baghdad University, Baghdad-Iraq.
*yoyayousif@yahoo.com, **h0142164@gmail.com

Abstract

In this work we explain and discuss new notion of fibrewise topological spaces, calledfibrewise soft ideal topological spaces, Also, we show the notions of fibrewise closed soft ideal topological spaces, fibrewise open soft ideal topological spaces and fibrewise soft near ideal topological spaces.

IOP Publisher Volume

Scope	Mathematics	Paper No.	320	Contribution	Oral

Application of Weyl Module In The Case Of Two Rows

Haytham R. Hassan 1, Niran Sabah Jasim 2

1 Department of Mathematic, College of Science, Al-Mustansiriyah University

2 Department of Mathematic, College of Education for Pure Science/ Ibn Al-Haitham, University of Baghdad

1 haythamhassaan@yahoo.com , 2 sabahniran @gmail.com

Abstract

The target of this work is to study the two rows resolution of Weyl module, and locate the terms and the exactness of the Weyl Resolution in the Case of Partition.

IOP Publisher Volume

Scope	Mathematics	Paper No.	323	Contribution	Oral

Solution Of nth-Order Ordinary Differential Equations Using Lie Group

Eman Ali Hussain 1 and Zainab Mohammed Alwan 2

1Asst. Prof, Dr., Department of Mathematics, College of Science, University of AL-Mustansiriyah, Iraq

2Asst. Lecturer .,Department of Mathematics, College of Science, University of AL-Mustansiriyah, Iraq

dreman@uomustansiriyah.edu.iq, *lionwight_2009@uomustansiriyah.edu.iq*

Abstract

In the recent work, methods of solution nth-order linear and nonlinear ODE′s of Lie group was introduced and the calculations of Lie point symmetries with higher order for ODEs were also achieved .

IOP Publisher Volume

Scope	Mathematics	Paper No.	6	Contribution	Oral

Effect of radial magnetic field on peristaltic transport of Jeffrey fluid in curved channel with heat /mass transfer

Ahmed M. Abdulhadi1, Tamara S. Ahmed2
College of science1, university of Baghdad,
Collage of education for pure science (ibn al Haitham)2,university of Baghdad,
ahm6161@yahoo.com, Tamaraalshareef@yahoo.com

Abstract

in this paper, we deals with the impact of radialiy magnetic field on the peristaltic transport of Jeffrey fluid through a curved channel with two dimensional. The effect of slip condition on velocity, the non-slip condition on temperature and conversation is performed. The heat and mass transfer are considered under the influence of various parameters. The flow is investigated under the assumption of long wave length and low Reynolds number approximations. The distribution of temperature and concentration are discussed for various parameters governing the flow with the simultaneous effects of Brinkman number, Soret number and Schmidt number.

IOP Publisher Volume

Scope	Mathematics	Paper No.	7	Contribution	Oral

On direct theorems for best polynomial approximation

A A Auad1 ,R S AbdulJabbar1

1 Department of mathematicsCollege of Education for Pure Science – AlAnbar University

Abstract

This paper is to obtain similarity for the best approximation degree of functions which are unbounded in $L_{p,\alpha}(A = [0,1])$which called weighted space by algebraic polynomials $E_n^H(f)_{p,\alpha}$ and the best approximation degree in the same space on the interval $[0,2\pi]$ by trigonometric polynomials $E_n^T(f)_{p,\alpha}$ of direct wellknown theorems in forms the average modules

IOP Publisher Volume

Scope	Mathematics	Paper No.	44	Contribution	Oral

Persons Camp Using Interpolation Method

Luma Naji Mohammed Tawfiq1 , Israa Najm Abood2
1College of Education for Pure Science Ibn Al-Haitham, Baghdad University,Iraq
2College of Science, Diyala University, Iraq
Author to whom correspondence should be addressed;
luma.n.m@ihcoedu.uobaghdad.edu.iq1 , snamath1982@gmail.com2

Abstract

The aim of this paper is to estimate the rate of contaminated soils by using suitable interpolation method as an alternative accurate tool to evaluate the concentration of heavy metals in soil then compared with standard universal value to determine the rate of contamination in the soil. In particular, interpolation methods are extensively applied in the models of the different phenomena where experimental data must be used in computer studies where expressions of those data are required.

In this paper the extended divided difference method in two dimensions is used to solve suggested problem. Then, the modification method is applied to estimate the rate of contaminated soils of displaced persons camp in Diyala Governorate, in Iraq.

IOP Publisher Volume

Scope	Mathematics	Paper No.	60	Contribution	Oral

Steady State Radial Flow in Anisotropic and Homogenous in Confined Aquifers

Luma Naji Mohammed Tawfiq1 and Alaa K Jabber3

1Department of Mathematics, College of Education for Pure Science Ibn Al-Haitham, Baghdad University, Baghdad, Iraq.

3Department of Mathematics, College of Education, University of Al-Qadisiyah, Al Diwaniyah, Iraq.

luma.n.m@ihcoedu.uobaghdad.edu.iq, alaa_almosawi@qu.edu.iq.

Abstract

The purpose of this paper is to introduce the analysis of steady-state radial flow in an anisotropic and homogenous hydraulic property and discuss who we can estimate aquifer parameters from field pumping tests.

IOP Publisher Volume

Scope	Mathematics	Paper No.	63	Contribution	Oral

Estimate the Effect of Rainwaters in Contaminated Soil by Using Simulink Technique

Luma N M Tawfiq*, Mohammed A Hassan**
Department of Mathematics, Collage of Education for pure sciences- Ibn Al-Haitham, University Baghdad, Baghdad, Iraq.
*dr.lumanaji@yahoo.com, **alamery85@yahoo.com

Abstract

The aim of this paper is to design a Simulink model which can estimate the effect of rainwaters in the contaminated soil by heavy metal. The paper suggests design of Simulink model to estimate concentration of heavy metals in soil depending on the given data. Then compared the results with laboratory inspecting to estimate the accuracy of suggested technique. Where the sample data selected from different zone in Baghdad before and after the rain to determine its effect. The practical results show the efficiency of suggested technique.

IOP Publisher Volume

Scope	Mathematics	Paper No.	64	Contribution	Oral

Estimation of Heavy Metals Contamination in the Soil of Zaafaraniya City Using the Neural Network

Farah F Ghazi
Department of Mathematics, College of Education for Pure Science Ibn Al-Haitham, Baghdad University.
mary_19862004@yahoo.com

Abstract

The aim of this paper is to estimate the heavy metals Contamination in soils which can be used to determine the rate of environmental contamination by using new technique depend on design feedback neural network as an alternative accurate technique. The network simulates to estimate the concentration of Cadmium (Cd), Nickel (Ni), Lead (Pb), Zinc (Zn) and Copper (Cu). Then to show the accuracy and efficiency of suggested design we applied the technique in Al- Zafaraniyah in Baghdad city. The results of this paper show that the suggested networks can be successfully applied to the rapid and accuracy estimation of concentration of heavy metals.

Scope	Mathematics	Paper No.	66	Contribution	Oral

Action of Groups on the Projective Plane over the Field $GF(41)$

Emad Bakr Al-Zangana, Saja Abd Joudah

Department of Mathematic, College of Science–Mustansiriyah University, Iraq.

e.b.abdulkareem@uomustansiriyah.edu.iq, saja94.abd@gmail.com

Abstract

An k-arc is a set of k points of a projective plane such that some 2, but no 3 of them, are collinear. In this paper, an 5- arc of stabilizer group of type dihedral group of degree five, D_5 with five collinear points has been found in $PG(2,41)$. From this 5-arc, a unique 6-arc of stabilizer group of type alternating group of degree five, A_5 with ten B-points is found. Finally, the effects of D_5 and A_5 on the points of $PG(2,41)$ are discussed.

IOP Publisher Volume

Scope	Mathematics	Paper No.	82	Contribution	Oral

Connecting on the Lattice Based Reductions for Computing the Generators in the ISD Method

Ruma K K Ajeena*, Sanaa K Kamal
Mathematics Department, Education College for Pure Sciences, University of Babylon, Iraq.
ruma.usm@gmail.com

Abstract

In this paper, the generalized Lagrange-Gauss reduction method to generate the generators in ISD method has been proposed. The comparison results on using the generalized Lagrange-Gauss reduction method and generalized extended Euclidean algorithm have been determined. As well as, the connection between the generalized Lagrange-Gauss Reduction and generalized extended Euclidean Algorithm to compute reduced bases to form the ISD generators in ISD elliptic scalar algorithm is presented.

IOP Publisher Volume

Scope	Mathematics	Paper No.	90	Contribution	Oral

Weakly Coretractable Modules

Inaam M A Hadi1, Shukur N Al-aeashi2

1Department of Mathematics, College of Education for Pure Sciences (Ibn-Al-Haitham), University Of Baghdad, Iraq.

2Department of Urban Planning, College of Physical Planning, University of Kufa, Iraq.

2shukur. mobred@uokufa. edu. iq

Abstract

If R is a ring with identity and M is a unitary right R-module. Here we introduce the class of weakly coretractable module. Some basic properties are investigated and some relationships between these modules and other related one are introduced.

IOP Publisher Volume

Scope	Mathematics	Paper No.	204	Contribution	Oral

Solving Modified Regularized Long Wave Equation Using Collocation Method

Hamad Salih1,2, Luma Naji Mohammed Tawfiq3, Zainor Ridzuan Yahya1, Shazalina Mat Zin1

1Institute of Engineering Mathematics, Universiti Malaysia Perlis, 02600 Pauh, Perlis, Malaysia,

2Department of Mathematics, University of Anbar, Al-anbar, Iraq,

3Department of Mathematics, University of Bagdad, Bagdad, Iraq

Abstract

In this paper, we suggest collocation method depending on Cubic trigonometric B-spline (CuTBS) approach based on finite difference scheme to solve the modified regularized long wave equation. The single solitary wave motion was studied using the proposed method; thus the accuracy and efficiency of the suggested method were computed from the L_2 , L_∞ norms. Also, the von-Neumann method was used to study the linear stability analysis. The obtained results through the tested two problems exhibited that, the method is an effective numerical scheme to solve Modified Regularized Long Wave equation (MRLW).

Scope	Mathematics	Paper No.	217	Contribution	Oral

FIBREWISE IJ-PERFECT BITOPOLOGICAL SPACES

Y.Y.Yousif, L.A.Hussain

Department of Mathematics, College of Education for Pure Science (Ibn Al-haitham), Baghdad University, Baghdad

yoyayousif@yahoo.com1, Liwaaalhashemy@gmail.com2

Abstract

The main purpose of this paper is to introduce a some concepts in fibrewise bitopological spaces which are called fibrewise ij, fibrewise ij-closed, fibrewise ij −compact, fibrewise ij-perfect, fibrewise weakly ij-closed, fibrewise almost ij-perfect, fibrewise ij^*-bitopological space respectively. In addition the concepts as ij-contact point, ij-adherent point, filter, filter base, ij-converges to a subset, ij-directed toward a set, ij-continuous, ij-closed functions, ij-rigid set, ij-continuous functions, weakly ij-closed, ij-H-set, almost ij-perfect, ij^*-continuous, pairwise Urysohn space, locally ij-QHC bitopological space are introduced and the main concept in this paper is fibrewise ij-perfect bitopological spaces. Several theorems and characterizations concerning with these concepts are studied.

IOP Publisher Volume

Scope	Mathematics	Paper No.	55	Contribution	Oral

Intuitionistic fuzzy n-fold KU-ideal of KU-algebra

Samy M Mostafa1, Fatema F Kareem2

1Department of Mathematics, Faculty of Education, Ain Shams University, Roxy, Cairo, Egypt

2Department of Mathematics, Collage of Education for pure sciences- Ibn Al-Haitham, University Baghdad, Baghdad, Iraq.

fa_sa20072000@yahoo.com

Abstract

In this paper, we apply the notion of intuitionistic fuzzy n-fold KU-ideal of KU-algebra. Some types of ideals such as intuitionistic fuzzy KU-ideal, intuitionistic fuzzy closed ideal and intuitionistic fuzzy n-fold KU-ideal are studied. Also, the relations between intuitionistic fuzzy n-fold KU-ideal and intuitionistic fuzzy KU-ideal are discussed. Furthermore, a few results of intuitionistic fuzzy n-fold KU-ideals of a KU-algebra under homomorphism are discussed.

IOP Publisher Volume

Scope	Mathematics	Paper No.	67	Contribution	Oral

Classical Artinian Module and Related Topics

Majid M Abed, Faisal G AL-Sharqi
Department of Mathematics, Faculty of Education for Pure Scinces, University of Anbar, Iraq.
mnh_nn60@yahoo.com

Abstract

An R-module M is Artinian iff every non-empty set of submodules admits a minimal element. The aim of this paper, is studied three cases. The first case is to provide general properties about Artinian module. The second case is explaining the relationship between semisimple module and Artinian module and the third case is the study of Artinian module over division ring. In a short way, Artinian modules are characterized by the existence of minimal elements. This suggests a close analogy between Artinian module and other concepts. We proved that if M is projective, then it is Artinian. Also every Division module over Division ring is Artinian module. Any non-zero Sub-mod N of sem-simple R-module. If N is a non-zero Sub-mod of M, then N is Artinian as a module.

IOP Publisher Volume

Scope	Mathematics	Paper No.	218	Contribution	Oral

ʎNαc - Continuous And ContraʎNαc-Continuous Mappings In Topological

Nadia Mohammed Ali Abbas
Ministry of Education, Iraq
E-mail: mali.nadia@yahoo.com

Abstract

The aim of this paper is to introduce a class of ʎNαc - continuous mappings by using the concept ofʎNαc - open sets in topological spaces like: ʎNαc, ʎNαc*andʎNαc** - continuous mapping with some of their properties. Moreoverwe studied a new kind ofʎNαc- continuous mappings which we called contraʎNαc-continuous mappings with some of their applications.

IOP Publisher Volume

Scope	Mathematics	Paper No.	239	Contribution	Oral

On Some Results of Topological Groupoid

Taghreed Hur Majeed
Department of Mathematics- College of Education – Al-Mustansiriyah University
taghreedmajeed@yahoo.com

Abstract

Our main interest in this study is to look for groupoid space and topological groupoid. In this paper, we give some results of groupoid space and topological groupoid, which are properties of source proper topological groupoid (SP-groupoid). In the end we introduced remarks, propositions and theorems.

IOP Publisher Volume

Scope	Mathematics	Paper No.	151	Contribution	Oral

Using Simulation Technique to overcome the multi-collinearity problem for estimating fuzzy linear regression parameters.

Hazim Mansoor Gorgees [1] ***and Mariam Mohammed Hilal*** [1]

1 Department of Mathematics, College of Education for Pure Science, Ibn-Al-Haitham, University of Baghdad, Iraq hazim5656@yahoo.com

1 Department of Mathematics, College of Education for Pure Science, Ibn-Al-Haitham, University of Baghdad, Iraq marmoon80@yahoo.com

Abstract

Fatigue cracking is one of the common types of pavement distresses and is an indicator of structural failure; cracks allow moisture infiltration, roughness, may further deteriorate to a pothole. Some causes of pavement deterioration are: traffic loading; environment influences; drainage deficiencies; materials quality problems; construction deficiencies and external contributors. Many researchers have made models that contain many variables like asphalt content, asphalt viscosity, fatigue life, stiffness of asphalt mixture, temperature and other parameters that affect the fatigue life. For this situation, a fuzzy linear regression model was employed and analyzed by using the traditional methods and our proposed method in order to overcome the multi-collinearity problem. The total spread error was used as a criterion to compare the performance of the studied methods. Simulation program was used to obtain the required results.

IOP Publisher Volume

Scope	Physics	Paper No.	214	Contribution	Oral

Study the effect of flow rate on some physical properties of different polymeric solutions

A R Jabur 1,*, M A Najim 1 and Sh A Abd Al- Rahman1
1Department of Materials Engineering, University of Technology, Baghdad/ Iraq
**130020@uotechnology.edu.iq*

Abstrac

In this study, three different polymers were used to produce electrospun scaffolds, polyvinyl alcohol (PVA) in a concentration of 8% w/v, nylon 6 in a concentration of 25% w/v, and poly (vinylpyrrolidone) (PVP) in a concentration of 4% w/v. These three polymer solutions were electrospun at different flow rates, to compare the effect of flow rate on the porosity, fiber diameter, and pore size of the scaffolds prepared from these polymer solutions. The flow rate range for PVA electrospinning started with (o.5, 1, 1.2, 1.5, and 2) ml/hr. While for nylon 6, the flow rate range started with (0.1, 0.5, 1, 1.5, and 2) ml/hr.; and for PVP, it started with (0.5, 0.7, 1, 1.2, and 1.5) ml/hr. It was observed that increasing the flow rate resulted in decreasing the porosity % and pore size due to increasing fiber diameter.

IOP Publisher Volume

Scope	Physics	Paper No.	301	Contribution	Oral

The enhancement of UV sensor response by zinc oxide nanorods /reduced graphene oxide bilayer nanocomposites film

Ali A A Mohammed1,2,a)*, AB Suriani1,2,b), Akram R Jabur 3,b) .
1Nanotechnology Research Centre, Faculty of Science and Mathematics, Universiti Pendidikan Sultan Idris, 35900 Tanjung Malim, Perak, Malaysia
2Departement of Physics, Faculty of Science and Mathematics, Universiti Pendidikan Sultan Idris, 35900 Tanjung Malim, Perak, Malaysia
3 Department of Materials Engineering, University of Technology, Baghdad, Iraq
a)ashanwer9@gmail.com , b)absuriani@yahoo.com , b)akram.jabut@gmail.com

Abstract

Zinc oxide nanorods (ZnO NRs) /reduced graphene oxide (rGO) nanocomposites assisted by sodium dodecyl sulfate surfactant (ZnO NRs/rGO-SDS) showed a good response for UV sensor application that has sensitivity of around ~32.54. Whereas, the UV sensor response on pristine ZnO NRs showed almost 15 times lower response than the ZnO NRs/rGO-SDS nanocomposites. The pristine ZnO NRs were prepared by sol-gel immersion method before rGO solution was sprayed on the ZnO films using spraying method. The GO solution was produced via electrochemical exfoliation method at 0.1 M SDS electrolyte then the solution was reduced using hydrazine hydrate under 24 hours magnetic stirring at a temperature of around ~100 °C. The samples were characterized using energy dispersive X-ray, field emission scanning electron microscope, micro-Raman, ultraviolet visible, , X-ray diffraction, UV lamp and four-point probe measurement. The aim of this study was to improve the UV sensor response based on ZnO/rGO-SDS nanocomposites. In conclusion, the fabricated ZnO NRs/rGO-SDS nanocomposites assisted with SDS is a good candidate for the use in UV sensor applications as compared to pristine ZnO NRs films.

IOP Publisher Volume

Scope	Physics	Paper No.	49	Contribution	Oral

The partial substitution of copper with nickel oxide on the Structural and electrical properties of HgBa2 Ca2 Cu3xNix O 8+δ superconducting compound

K A Jasim L A Mohammed

Department of physics/ College of Education For Pure Science Ibn AlHaitham University of Baghdad Baghdad Iraq

Abstract

The present study the partial substitution of copper with nickel on of HgBa2Ca2 Cu3xNix O8+δ superconducting compound where x=002040608 Samples were prepared by solid state reaction method with sintering temperature 850C0 for 24h. By using Xray powder diffraction structural of the samples were studied. The XRD analysis's showed the structures a polycrystalline with tetragonal diagram with majority 1223 phase and the change of the nickel concentrations produce a change in lattice parameters of the lattice a b and c axis c/a density of mass ρm and volume fraction Vphase. Four probe apparatus was using to test the electrical resistivity to defined the critical temperature at zero resistivity Tc offset Optimum Tc offset was found from HgBa2Ca2Cu24Ni06O8+δ sample with transition temperature its equal to 137K.

IOP Publisher Volume

Scope	Physics	Paper No.	156	Contribution	Oral

Repeatability and Reversibility of the Humidity Sensor Based on Photonic Crystal Fiber Interferometer

S S Hindal1, H J Taher2

1 Materials Research Directorate, Ministry of Science & Technology, Iraq.
2 Institute of Laser for Postgraduate Studies, University of Baghdad, Iraq.

Abstract

The RH sensor operation based on water vapor adsorption and desorption at the silica-air interface within the PCF. Sensor fabrication is simple; it includes splicing and cleaving the PCF with SMF only. PCF (LMA-10) with a certain length spliced to SMF (Corning-28). The PCFI spectrum exhibits good sensitivity to the variations of humidity. The PCFI response is observed for range of relative humidity values from (27% RH to 85% RH), the interference peaks position is found to be shifted to longer wavelength as the humidity increases. In this work, a 6cm length of PCFs is used, and it shows a sensitivity of (2.41pm / %RH), good repeatability, and reversible in nature. This humidity sensor has distinguished features as that the sensor does not require the use of a hygroscopic material, robust, compact size, immunity to electromagnetic interference, and it has potential applications for high humidity environments.

IOP Publisher Volume

Scope	Physics	Paper No.	2	Contribution	Oral

Enhanced photo-response of porous silicon photo-detectors by embedding Titanium-dioxide Nano-particles

Hiba M Ali1,2, Sameer A Makki1, Ahmed N Abd3

1Department of Physics, College of Education for Pure Sciences/ Ibn- Al-Haithem, University of Baghdad, Baghdad ,Iraq

3Department of Physics, Collage of Science, Al- Mustansiriyah University/ Baghdad/ Iraq.

1,2 hibamumtazali@yahoo.com

Abstract

Porous silicon (n-PS) films can be prepared by photoelectochemical etching (PECE) Silicon chips n - types with 15 (mA /cm2), in15 minutes etching time on the fabrication nano-sized pore arrangement. By using X-ray diffraction measurement and atomic power microscopy characteristics (AFM), PS was investigated. It was also evaluated the crystallites size from (XRD) for the PS nanoscale. The atomic force microscopy confirmed the nano-metric size chemical fictionalization through the electrochemical etching that was shown on the PS surface chemical composition. The atomic power microscopy checks showed the roughness of the silicon surface. It is also notified (TiO2) preparation nano-particles that were prepared by pulse laser eradication in ethanol (PLAL) technique through irradiation with a Nd:YAG laser pulses TiO2 target that is sunk in methanol using 400 mJ of laser energy. It has been studied the structural, optical and morphological of TiO2NPs.It has been detected that through XRD measurement , (TiO2) NPs have been Tetragonal crystal structure. While with AFM measurements, it has been realized that the synthesized TiO2 particles are spherical with an average particle size in the (82 nm) range. It has been determined that the energy band gap of TiO2 NPs from optical properties and set to be in (5eV) range .The transmittance and reflectance spectra have determined the TiO2 NPs optical constants. It was reported the effectiveness of TiO2 NPs expansion on the PS Photodetector properties which exposes the benefits in (Al/PS/Si/Al). The built-in tension values depend on the etching time current density and laser flounce. Al/TiO2/PS/Si/Al photo-detector heterojunction have two response peaks that are situated at 350 nm and (700 -800nm) with max sensitivity ≈ 0.7 A/W. The maximum given detectivity is 9.38at ≈ 780 nm wavelength.

IOP Publisher Volume

Scope	Physics	Paper No.	68	Contribution	Oral

Design of Light Trapping Solar Cell System by Using Zemax Program

A B Hasan1 , S A Husain1

1physics department, College of education for pure sciences-Ibn Alhaitham, University of Baghdad, Iraq

Abstract

Square micro lenses array have been designed (by using Zemax optical design program) to concentrate solar radiation into variable slits that reaching light to solar cell. This technique to increase the efficiency of solar system by trapping light due to internal reflection of light by mirrors that placed between upper and lower side of solar cell, therefore increasing optical path through the solar cell, and then increasing chance of photon absorption.

The results show priority of solar system that have slit of (0.2 mm) , and acceptance angle of (20o) that give acceptable efficiency of solar system .

IOP Publisher Volume

Scope	Physics	Paper No.	70	Contribution	Oral

Practical Study for the Properties of Hueckel Edge Detection Operator

Hameed M Abdul Jabbar, Amal J Hatem, Inbethaq M A Abdul Ameer
Physics Department, College of Education for Pure Science (Ibn Al-Haitham), University of Baghdad, Iraq.

Abstract

The first practical study for the Hueckel edge detection operator was presented in this research, where it is tested on standard step edge set images. A number of criteria were adopted to evaluate its practical performance, which is the accuracy in detecting the edges direction, the error in the edges location (dislocation), edges width, the calculated edge goodness criterion and the consumed execution time. These criteria were studied with the edge direction and the used disk radius of the Hueckel edge detection operator. Important notes were recorded for the performance of this operator depending on the direction of the edge and/or with the radius of the used disk. There is a variation in the performance of the operator in terms of precision in detecting of the edges direction and position. A discussion was presented for the all criteria adopted in the research.

IOP Publisher Volume

Scope	Physics	Paper No.	121	Contribution	Oral

Reaching to a featured formula to deduce the energy of the heaviest particles producing from the controlled thermonuclear fusion reactions

Raad H Majeed1, Osamah N Oudah2

1Department of physics/ college of education for pure science (ibn-al-haitham)/ University of Baghdad, Iraq

2Department of physics / college of education, University of Al-Qadisiyah, Iraq.

1 raad.h.m@ihcoedu.uobaghdad.edu.iq , 2 osamah.oudah@qu.edu.iq

Abstract

Thermonuclear fusion reaction plays an important role in developing and construction any power plant system. Studying the physical behavior for the possible mechanism governed energies released by the fusion products to precise understanding the related kinematics. In this work a theoretical formula controlled the general applied thermonuclear fusion reactions is achieved to calculating the fusion products energy depending upon the reactants physical properties and therefore, one can calculate other parameters governed a given reaction. By using this formula, the energy spectrum of 4He produced from T-3He fusion reaction has been sketched with respect to reaction angle and incident energy ranged from (0.08-0.6) MeV.

IOP Publisher Volume

Scope	Physics	Paper No.	215	Contribution	Oral

Effect of particle size of TiO2 and additive materials to improve dye sensitized solar cells efficiency

Falah H Ali 1, 3 , Dheyaa B Alwan2

1 Phsics Department, College of Science, University of Baghdad, Iraq.

2 Ministry of Education, Karkh / 1, secondary distinguished Harthiya of Baghdad, Iraq.

3 Falah_h75@yahoo.com

Abstract

It became great interest Dye-sensitized solar cells (DSSC) as a successful alternative to silicon solar cells in terms of cost and simplicity. These cells rely on a semi-conductive material of electricity TiO2 monocrystalline which encapsulates glass electrodes from the connected side at a temperature 450oC. In this work, the effect of nanoparticle size shows the size of atoms. The smaller the size of the atoms, the greater the surface area and thus the sufficient absorption of the dye and the stimulation of electrons, where increasing surface area increases efficiency. Then a limited amount was added and at a certain concentration, which led to a reasonable improvement in efficiency. According to this procedure commercially available TiO2 (10 nm,25 nm,33 nm, 50 nm) standard. A TiO2 paste was prepared by mixing commercial TiO2, ethanol, distilled water, F:SnO2 (FTO film thickness 14 µm) conductive glasses. By using Dr. Blade method we got films with appropriate thicknesses, then by using several particle sizes (10 nm,25 nm ,33 nm, 50 nm) ,many efficiencies were founded (2.39 %, 2.1 %,1.85 %,1.65%) respectively. Improved solar cell efficiency after addition of several chemical materials and the best that got is Cu (NO3)2 . Efficiency became for (10 nm) (2.61 %, 2.34 %,2.1%,1.85%) respectively under 40 mW/cm2 .

IOP Publisher Volume

Scope	Physics	Paper No.	266	Contribution	Oral

Evaluation of the Epoxy/Antimony Trioxide Nanocomposites as Flame Retardant

Balqees M Dheyaa1,Widad H Jassim2 and Noor A Hameed2
1Department of Applied Sciences, University of Technology
2Department of Physics, College of Education for Pure Science Ibn-Al-Haitham, University of Baghdad

Abstract

Antimony trioxide Nano powder was added for epoxy resin in various amount weight percentages (0, 2, 4, 6, 8, and 10) wt.% to increase the combustion resistance and decrease the flammability for it. The study included three standard tests used to measure: limiting oxygen index (LOI), rate of burning (R.B), burning extent (E.B), burning time (T.B), maximum flame height (H) and residue percentage after burning in order to determine the effectiveness of the used additives to decrease the flammability of epoxy resin and increase the combustion resistance. Thermal test was done by using Lee's disk to measure the thermal conductivity coefficient. The thermal stability and degradation kinetics of epoxy resin without reinforcement and with reinforcement by (10 wt%) were studied by using thermogravimetric analysis (TGA). The recorded results indicated that epoxy reinforced by (10 wt%) has a good effect as flame retardants for epoxy resin and active to inhibit burning and reduce the flammability.

IOP Publisher Volume

Scope	Physics	Paper No.	91	Contribution	Oral

Measure of Backscatter for small particles of atmosphere by lasers

Mariam M Abud

Department of Physics, College of Education for Pure Sciences/ Ibn- Al-Haitham, University of Baghdad, Baghdad ,Iraq

Abstract

It developed a program for the atmosphere to study the backscattering for contents gas &Molecules, Aerosol, Fog, clouds and rain droplets. By using Rayleigh, Mie and geometric scattering . The aim of research Using different types of lasers from various optical region to calculate differential cross scatter section and backscatter of atmosphere component in one layer from height 10-2000m. 180o is backscattering angle using ISA standard sea level condition P=1013.25 (kpa) at t0 =15 ° C.and then calculated the density of molecules and water vapor molecules represented D in kg/m3 .Results reflected index consist of the large value of the real part and imaginary m=1.463-0.028i.this research diff. scatter cross section of different component of atmosphere layer decreased vs. wavelengths . The purpose of lider research to find backscatter from UV to IR laser within the optical range in the atmosphere and measurement of excitation and analysis of backscatter signals. Recently, the atmosphere of Iraq has become full of dust and pollution, so by knowing the differential cross scatter section and backscatter of atmosphere. Relation between total Rayleigh scatter coefficient & type of particles include fog and clouds, Aerosols and Water Droplet (-0.01, 0.025,- 0.005) m-1/sr-1.

IOP Publisher Volume

Scope	Physics	Paper No.	29	Contribution	Oral

Radiological Risk Assessments for Occupational Exposure at Fuel Fabrication Facility in AlTuwaitha Site Baghdad – Iraq by using RESRAD Computer Code

Ziadoon H Ibrahim1, S A Ibrahim2, M K Mohammed1 ,A H Shaban2
1Central Laboratories Directorate Ministry of Science and Technology
2Department of Physics College of Education Ibn Al-Haitham University of Baghdad

Abstract

The purpose of this study is to evaluate the radiological risks for workers for one year of their activities at Fuel Fabrication Facility (FFF) so as to make the necessary protection to prevent or minimize risks resulted from these activities this site now is under the Iraqi decommissioning program (40) Soil samples surface and subsurface were collected from different positions of this facility and analyzed by gamma rays spectroscopy technique High Purity Germanium detector (HPGe) was used It was found out admixture of radioactive isotopes (232Th 40K 238U 235U137Cs) according to the laboratory results the highest values were (975758) for 238U (21203) for 235U (218) for 232Th (4046) for 40K and (129) for 137Cs in (Bqkg1) unit The annual total radiation dose and risks were estimated by using RESRAD (onsite) 70 computer code The highest total radiation dose was (5617μSv/year) in area that represented by soil sample (S7) and the radiological risks morbidity and mortality (118E02 8661E03) respectively in the same area

1 Introduction

Italian fuel fabrication facility (FFF) is located in AlTwaitha site at Iraq / Baghdad at 33o 1257 North and 44o 31822 East It was previously belong to the Iraqi Atomic Energy Commission (IAEC) The total area of this site was about (13 km2) the concern facility FFF area around (37400 m2) Each soil sample represent (100 m2) from this facility were as in 'figure 6' During the second Gulf war (1991) it was completely destroyed and now is subjected to the Iraqi decommissioning project(IDP) The facility was contaminated by Uranium radionuclides (238U235U) in soil concrete equipments and scrap materials

IOP Publisher Volume

Scope	Physics	Paper No.	130	Contribution	Oral

Multispectral and Panchromatic used Enhancement Resolution and Study Effective Enhancement on Supervised and Unsupervised Classification Land – Cover

S S Salman, W A Abbas

Department of Clinical Laboratory Science , College of Pharmacy, University of Baghdad, Baghdad, Iraq.

Abstract

The goal of the study is to support analysis Enhancement of Resolution and study effect on classification methods on bands spectral information of specific and quantitative approaches. In this study introduce a method to enhancement resolution Landsat 8 of combining the bands spectral of 30 meters resolution with panchromatic band 8 of 15 meters resolution, because of importance multispectral imagery to extracting land - cover. Classification methods used in this study to classify several lands -covers recorded from OLI- 8 imagery. Two methods of Data mining can be classified as either supervised or unsupervised. In supervised methods, there is a particular predefined target, that means the algorithm learn which values of the target are associated with which values of the predictor sample. K-nearest neighbors and maximum likelihood algorithms examine in this work as supervised methods. In other hand, no sample identified as target in unsupervised methods, the algorithm of data extraction searches for structure and patterns between all the variables, represented by Fuzzy C-mean clustering method as one of the unsupervised methods, NDVI vegetation index used to compare the results of classification method, the percent of dense vegetation in maximum likelihood method give a best results.

IOP Publisher Volume

Scope	Physics	Paper No.	3	Contribution	Oral

The Effects of micro Aluminum fillers In Epoxy resin on the thermal conductivity

Kareem A Jasim* , Rihab N Fadhil**

Department of Physics, College of Education for pure science, University of Baghdad, Baghdad, Iraq.

**kareem.a.j@ihcoedu.uobaghdad.edu.iq, **rahb_naser@yahoo.com*

Abstract

A hand lay-up molding method was used to prepare Epoxy/ Aluminum composites. As a matrix used Epoxy resin (EP) with reinforced by Aluminum particles. The preparation technique includes preparing carousel mold with different weight percentage of fillers (0, 0.05, 0.15, 0.25, 0.35, and 0.45). Standard specimens (in 30 mm diameter) were prepared to the thermal conductivity tests. The result of experimental thermal conductivity (k), for EP/ Aluminum composites show that , k increase with increasing Aluminums percentage and it have maximum values of (1.4595 W/m .K).

IOP Publisher Volume

Scope	Physics	Paper No.	8	Contribution	Oral

Study of vegetation cover distribution using DVI, PVI, WDVI indices with 2D-space plot

Taghreed A H Naji
Department of Physics, College of Education for Pure Sciences/ Ibn- Al-Haitham, University of Baghdad, Baghdad ,Iraq
Taghreednaji1972@gmail.com

Abstract

The present work aims to study the effect of using vegetation indices technique on image segmentation for subdividing an image into the homogeneous regions. Three of these vegetation indices technique has been adopted (i.e. Difference Vegetation-Index (DVI), Perpendicular Vegetation Index (PVI) and Weighted Difference Vegetation Index (WDVI)) for detecting and monitoring vegetation distribution and healthiness. Image binarization method being followed the implementation of the indices to isolating the vegetation areas from the image background. The separated agriculture regions from other land use regions and their percentages are presented for two years (2001 and 2002) of the (ETM+) scenes. The counted areas resulted from 2D-space plot technique and the separated vegetated areas resulted from the using of the vegetation indices are also presented. The separated agriculture regions from the implementation of the DVI-index have proved better than other used indices. Because it showed better coincident approximately with 2D-space plot segmentation.

IOP Publisher Volume

Scope	Physics	Paper No.	21	Contribution	Oral

Fabrication and characterization study of ZnTe/n-Si heterojunction solar cell application

Bushra K H AlMaiyaly1, Bushra H Hussein Auday H Shaban
Department of physics College of Education For Pure Science (Ibn AlHaitham)
University of Baghdad Baghdad Iraq
drbushra2009 @yahoocom

Abstract

Different thicknesses (150 250 and 350) ±20 nm has been deposited on the glass substrate and nSi wafer to fabricate ZnTe/n-Si heterojunction solar cell by vacuum evaporation technique Structural optical electrical and photovoltaic properties are investigated for the samples. The structural characteristics studied via X ray analyses indicated that the films are polycrystalline besides having a cubic (zinc blende) structure also average diameter and surface roughness˛ calculated from AFM images The optical measurements of the deposited films were performed in different thicknesses to determine the transmission spectrum as a function of incident wavelength in the range of˛ wavelength (4001000) nm and the optical energy gap calculated from the optical absorption spectra was found to reduse with thickness The IV characteristic at (dark and illuminated) and CV measurement for ZnTe/n-Si heterojunction shows the good rectifying behaviour under dark condition. The measurements of opencircuit voltage (VOC) short-circuit current density (JSC) fill factor (FF) and quantum fficiencies of the ZnTe/n-Si heterojunction are calculated for all samples The results of these studies are presented and˛ discussed in this paper

IOP Publisher Volume

Scope	Physics	Paper No.	23	Contribution	Oral

Effect of Aluminum on Characterization of ZnTenSi Heterojunction Photo detector

Samir A Maki Hanan K Hassun
Department of physics College of Education For Pure Science (Ibn AlHaitham)
University of Baghdad Baghdad Iraq

Abstract

Aluminum doped zinc telluride ZnTenSi thin films of (400nm) thickness with (005 01 015 and 02) wt % were deposited on the glass substrate and nSi wafer to fabricate ZnTenSi heterojunction Photodetector by using thermal vacuum evaporation technique Structural optical electrical and photovoltaic properties are investigated for the samples XRD analysis shows that all the deposited ZnTenSi films show polycrystalline structure with cubic phases and highest sharp peak corresponding to (111) planes and from AFM images shows the surface roughness increase with increase Al percentage ratio The optical absorption measurement of the films was find from transmittance ranges in the variety of wavelength (400 1000) nm and the optical energy band gap decrease from 224 eV to 186 eV dependent upon the Aluminum ratio in the films moreover our studies contain the calculation of the electrical properties of hetero junction were obtained via IV (dark and light condition) and C V measurement The photoelectric properties indicated rise illumination current of heterojunctions through increasing both of incident lighting intensity and Aluminum dopant The values of specific detectivity and quantum efficiency are calculated for all samples also the best spectral response occurs when Al doping ratio 02% The high photo sensitivity and comparatively fast response haste are attributable to in height crystal quality of the [ZnTe] thin films

IOP Publisher Volume

Scope	Physics	Paper No.	102	Contribution	Oral

Wind Turbine Bearing Diagnostics Based on Vibration Monitoring

H T Kadhim1, F H Mahmood 2, and A K Resen3

1Ministry of Higher Education and Scientific Research, Baghdad, Iraq

2 Remote Sensing Unit, College of Science, Baghdad University, Baghdad, Iraq

3 Ministry of Science and Technology, Renewable Energy Directorate, Baghdad, Iraq

Abstract

Reliability maintenance can be considered as an accurate condition monitoring system which increasing beneficial and decreasing the cost production of wind energy. Supporting low friction of wind turbine rotating shaft is the main task of rolling element bearing and it is the main part that suffers from failure. The rolling failures elements have an economic impact and may lead to malfunctions and catastrophic failures. This paper concentrates on the vibration monitoring as a Non-Destructive Technique for assessing and demonstrates the feasibility of vibration monitoring for small wind turbine bearing defects based on LabVIEW software. Many bearings defects were created, such as inner race defect, outer race defect, and ball spin defect. The spectra data were recorded and compared with the theoretical results. The accelerometer with 4331 NI USB DAQ was utilized to acquiring, analyzed, and recorded. The experimental results were showed the vibration technique is suitable for diagnostic the defects that will be occurred in the small wind turbine bearings and developing a fault in the bearing which leads to increasing the vibration amplitude or peaks in the spectrum.

IOP Publisher Volume

Scope	Physics	Paper No.	112	Contribution	Oral

Synthesis and characterization of porous silicon gas sensors

Roaa A abbas1, Alwan M Alwan2, Zainab T Abdulhamied1
1Ministry of science and technology (directorate of material researches)
2University of Technology (Applied Sciences Department)
noor_ok_2@yahoo.com

Abstract

In this work, photo-electrochemical etching process of n-type Silicon of resistivity(10 Ω.cm) and (100) orientation , using two illumination sources IR and violet wavelength in HF acid have been used to produce PSi gas detection device. The fabrication process was carried out at a fixed etching current density of 25mA/cm2and at different etching time (5, 10, 15 and 20) min and (8, 16, 24, and 30) min. Two configurations of gas sensor configuration planer and sandwich have been made and investigated. The morphological properties have been studied using SEM ,the FTIR measurement show that the (Si-Hx) and (Si-O-Si) absorption peak were increases with increasing etching time ,and Photoluminescence properties of PSi layer show decrease in the peak of PL peak toward the violet shift. The gas detection process is made on the CO2 gas at different operating temperature and fixed gas concentration. In the planner structure, the gas sensing was measured through, the change in the resistance readout as a function to the exposure time, while for sandwich structure J-V characteristic have been made to determine the sensitivity.

IOP Publisher Volume

Scope	Physics	Paper No.	189	Contribution	Oral

Recycling the construction and demolition waste to produce polymer concrete

Mohammad T. Hamza 1 and Dr. Awham M. Hameed 1
1 Applied Sciences Department, University of Technology, Iraq, Baghdad.
mohammad_tahir_84@yahoo.com

Abstract

The sustainable management for solid wastes of the construction and demolition waste stimulates searching for safety applications for these wastes. The aim of this research is recycling of construction and demolition waste with some different types of polymeric resins to be used in manufacturing process of polymer mortar or polymer concrete, and studying their mechanical and physical properties, and also Specify how the values of compressive strength and the density are affected via the different parameters. In this research two types of construction and demolition waste were used as aggregates replacement (i.e. waste cement/concrete debris, and the waste blocks) while the two types of polymer resins (i.e. Unsaturated polyester and Epoxy) as cement replacements. The used weight percentages of the resins were changed within (15, 20, 25 and 30) % to manufacture this polymer concrete.

IOP Publisher Volume

Scope	Physics	Paper No.	267	Contribution	Oral

Theoretical Calculation of the Electron Transport Parameters and Energy Distribution Function for CF3I with noble gases mixtures using Monte Carlo simulation program

Enas A Jawad

physics department, College of education for pure sciences-Ibn Alhaitham, University of Baghdad, Iraq

Abstract

In this paper, The Monte Carlo simulation program has been used to calculation the electron energy distribution function (EEDF) and electric transport parameters for the gas mixtures of The trif leoroiodo methane (CF3I) 'environment friendly' with a noble gases (Argon, Helium , kryptos, Neon and Xenon).

The electron transport parameters are assessed in the range of E/N (E is the electric field and N is the gas number density of background gas molecules) between 100 to 2000Td (1 Townsend =10-17 V cm2) at room temperature. These parameters, namely are electron mean energy (ε) , the density –normalized longitudinal diffusion coefficient (NDL) and the density –normalized mobility (μN) .

In contrast, the impact of CF3I in the noble gases mixture is strongly apparent in the values for the electron mean energy, the density –normalized longitudinal diffusion coefficient and the density –normalized mobility. Note in the results of the calculation agreed well with the experimental results.

IOP Publisher Volume

Scope	Physics	Paper No.	124	Contribution	Oral

Structural and optical properties of colloidal InZnO NPs prepared by laser ablation in liquid

Maryam M khlewee, Khawla S Khashan
Department of Applied Science, University of Technology, Baghdad, Iraq.

Abstract

In the current work, colloidal of InZnO NPs were produced by pulsed laser ablation in liquid (PLAL) method. The effect of indium content on the structural, morphological and optical of the InZnO NPs was confirmed by Fourier transform infrared spectroscopy, Scanning electron microscopy, and UV-visible spectroscopy. The FTIR spectra showed the presence of the metal-oxide bond. The SEM exhibit different morphological aspects according to the (In/Zn) ratio. The optical transmittance of InZnO NPs has high value around 70 % in the visible region and the band gap value was varied between 3.29 to 3.25 eV.

IOP Publisher Volume

Scope	Physics	Paper No.	137	Contribution	Oral

Spatial and Temporal Temperature trends on Iraq during 1980-2015

Yassen K. Al-Timimi1, Aws A. Al-Khudhairy2

1 Atmosphere department, College of Science, Al-Mustansiriyah University, IRAQ

2 Atmosphere department, College of Science, Al-Mustansiriyah University, IRAQ

awssss_ali@yahoo.com

Abstract

Monthly Mean surface air temperature at 23 stations in Iraq were analyzed for temporal trends and spatial variation during 1980-2015.Seasonal and annual temperature was analyzed using Mann-Kendall test to detect the significant trend .The results of temporal analysis showed that during winter ,spring , summer and Autumn have a positive trend in all the parts of Iraq. A tendency has also been observed towards warmer years, with significantly warmer summer and spring periods and slightly warmer autumn and winter, the highest increase is (3.5)oC in Basrah during the summer. The results of spatial analyze using the ArcGIS showed that the seasonal temperature can be divided into two or three distinct areas with high temperature in the south and decreasing towards north, where the trend of spatial temperature were decreasing from south to the north in all the four seasons.

IOP Publisher Volume

Scope	Physics	Paper No.	173	Contribution	Oral

Measuring of nonlinear properties of spatial light modulator with different wavelengths

Farah G. Khalid1*, Samar Younis Al-Dabagh2, Sudad S. Ahmed3, Aseel I. Mahmood4, Kais Al-Naimee3

1 Baghdad University / Collage of Agriculture / Basic of Science department/Baghdad/ Iraq

2 Baghdad University / Collage of Science for Women / Physics department /Baghdad/ Iraq

3 Baghdad University / Collage of Science / Physics department /Baghdad/ Iraq

4 Ministry of Science and Technology / material research directorate / Baghdad/ Iraq

** E-mail: farah_physicalaf70@yahoo.com*

Abstract

The non-linear optical properties of Spatial Light Modulator(SLM) represented by Nonlinear Refractive Index (NLR) and nonlinear Absorption coefficient has been measured in this work using highly sensitive method known as Z-scan technique for different wavelengths (red and green). The capability to do instant measurements of different nonlinear optical parameters lead to consider these techniques as a one of the most desired and effective methods that could apply for different materials. The results showed that the NLR were in the same power for the different wavelengths while the nonlinear absorption is higher in case of green laser.

IOP Publisher Volume

Scope	Physics	Paper No.	136	Contribution	Oral

Enhance the performance of liquid crystal as an optical switch by doping CdS quantum dots

Sudad S Ahmed1, Rawa K Ibrahim2, 1, Kais Al- Naimee1, Asama N Naje, Omar A Ibrahim1, K A Majeed1

1Department of Physics, College of Science, University of Baghdad, Baghdad, Iraq
2Laser &Electro-Optic Centre, Advanced Materials Research Directorial, Ministry of Science and Technology, Baghdad, Iraq
2,1rawak2070@gmail.com

Abstract

The electrical and optical properties results were studied for Cadmium Sulphide (CdS) Nanoparticles/ Nematic liquid crystal (5CB) mixtures. Doping of CdS nanoparticles increases the spontaneous polarization and response time, the increase is due to large dipole-dipole interaction between the liquid crystal (LC) molecules and CdS nanoparticles, which increase the anchoring energy. The electro-optic measurements revealed a decrease (~40%) in threshold voltage, and faster response time in doped sample cells than Pure 4'-n-pentyl-4-cyanobiphenyl (5CB) nematic liquid crystal.

IOP Publisher Volume

Scope	Physics	Paper No.	138	Contribution	Oral

Dispersion Parameters of Polyvinyl Alcohol Films doped with Fe

Nadir F Habubi1, Khalid H Abass2, Chiad S Sami1, Duha M A Latif3, Jandow N Nidhal1, A Ismaeel Al Baidhany1

1Department of Physics, College of Education, Mustansiriyah University, Baghdad, Iraq

2Department of Physics, College of Education for Pure Sciences, University of Babylon, Babylon, Iraq

3Department of Physics, College of Education for Pure Sciences, University of Baghdad, Baghdad, Iraq.

nadirfadhil@uomustansiriyah.edu.iq, pure.khalid.haneen@uobabylon.edu.iq, dr.sami@uomustansiriyah.edu.iq, nidhaljandow@uomustansiriyah.edu.iq, ismaeel_2000@uomustansiriyah.edu.iq.

Abstract

Polyvinyl alcohol polymer was dissolved in water in order to prepare films with different concentration of Fe utilizing casting method. The optical properties were obtained by recording the transmittance spectrum in the wavelength range (300-900) nm. The dispersion parameters were calculated using the Wemple–DiDomenico method. Dispersion energy (Ed) and the single oscillator energy of electronic transition (Eo) were decreased with the increasing of Fe content in the PVA-Fe films. While Urbach energy was increased. The energy gap decreased from 4.08 eV to 3.52 eV for PVA: 4% Fe film.

IOP Publisher Volume

Scope	Physics	Paper No.	192	Contribution	Oral

Estimation of geometrical shapes of mass-formed nuclei (A=102-178) from the calculation of deformation parameters for two elements (Sn & Yb)

Sameera A. Ebrahiem1, Haider A. Zghaier2

1Department of PhysicsCollage of Education Ibn Al-Haitham ,University of Baghdad

1Council of Ministers Iraqi Radioactive Sources Regulatory Authority

Abstract

The present research focused on the studying of even- even nuclei forms for elements with mass numbers greater than 100 ($A > 100$) for ($^{102-134}_{50}Sn$&$^{152-178}_{70}Yb$) isotopes. Which included the study of deformation parameters (β_2) derived from the Reduced Electric Transition Probability $B(E2)\uparrow$ based on the energy of the first Excited State (2^+), and distortion parameter (δ) from Intrinsic Electric Quadrupole Moments (Q_0). Roots Mean Square Radii $< r^2 >^{1/2}$were also calculated and compared with theoretical values.The diversity of nuclei forms for selected isotopes and their differences was observed by plotting three-dimensional shapes (axially symmetric) in addition to drawing two-dimensional shapes of single element isotopes to distinguish between them by using semi-major (a) and semi minor (b) axes.

IOP Publisher Volume

Scope	Physics	Paper No.	11	Contribution	Oral

The Effect of Oxygen Flow on the Transition Temperature of Hg0.75Pb0.25Sr2-yBayCa2Cu3O8+ δ Superconductors

Kareem A Jasim, Raghad S Al-Khafaji
Department of Physics, College of Education for Pure Sciences/ bn- Al-Haithem, University of Baghdad, Baghdad,Iraq
raghadsubhiabbas@yahoo.com

Abstract

In this paper, there are three different high temperature superconductors which are Hg0.75Pb0.25Sr2-y BayCa2Cu3O8+δ with deferent weight fractions y = 0.10, 0.20 and 0.25 that have been prepared successfully by solid state reaction and the samples have been equipped with/without O2 flow. The optimum calcinations is 1073 K and the sintering process that has been achieved within 1128-1133 K. Transition temperature Tc has been found by using four probe technique through electrical resistivity measurements. The greatest Tc that has been found for Hg0.75Pb0.25Sr1.75 Ba0.25Ca2Cu3O8.31 is 115 oK. Oxygen content (O2) flow exhibits high- phased superconductors that is similar to the samples prepared without O2. Investigation of X-ray diffraction (XRD) is revealed (tetragonal structure) by the c-axis lattice parameter increasing of the samples substituted with Ba. It has been established, from the calculated results, that the Ba variation concentrations of all samples products a modification in the density (ρm), (c/a) and volume fraction (VPh(2223)).

IOP Publisher Volume

Scope	Physics	Paper No.	231	Contribution	Oral

La+3 effectiveness replacement on the ferrite material (Cu0,2Zn0,45LaxFe2-xO4) On the structural and electrical and magnetic features

Farouq I Hussain, Rusul Alaa Najem

Baghdad University-Physics Department , College of Education for pure science /Ibn Al-Haitham

Abstract

Nano ferrite with chemical formula ($Ni_{0.35}Cu_{0.2}Zn_{0.45}La_xFe_{2-x}O_4$) , were chemically collected utilizing sol-gel auto – combustion procedure for the values of (X=0.0, 0.025, 0.05 and 0.075). The prepared samples were calcined at (900℃) for (2h), the formation of ferrite was assured using (XRD) and (SEM) techniques. X-ray diffractometer result shows that ferrite have spinal cubic phase with a particle size ranging from (22-29 nm),the Lattice constant and density (ρx-ray) increased with La+3content while the porosity was noticed to decrease. And have been studied dielectric properties It was also observed that the value of the dielectric constant and the dielectric loss factor decreased by increasing the frequency. The increase in alternating conductivity (σa.c) was also observed with increasing frequency.

IOP Publisher Volume

Scope	Physics	Paper No.	236	Contribution	Oral

Partial substitution of Zn Effects on the Structural and Electrical Properties of High Temperature Hg0.95Ag0.05Ba2Ca2Cu3O8+δ Superconductors

Noor S. Abed 1, Sabah J. Fathi 1, Kareem A. Jassim2 & Shatha H. Mahdi2
1Department of Physics, College of Sciences, Kirkuk University, Kirkuk, Iraq.
2University of Baghdad, College of Education, for pure science, of pure science Ibn - Al-Haithem, Department of Physics, Iraq.
bilalahmed983339@yahoo.com, shatha246@yahoo.com

Abstract

The effect of the Ag partial substitution at Hg site in HgOδ layer and Zn partial substitution at Ca site in CaO layer on the structure ,Tc ,electrical properties , and oxygen content for Hg-1223 have been studied . Bulk polycrystalline Hg1-xAgxBa2Ca2-yZnyCu3O8+δ compound samples with x=0.05 and y =0.0, 0.05, 0.1, 0.15, 0.2, 0.25, and 0.3, are synthesized by a solid state reaction process. Structural properties are studied by using X-ray powder pattern, the high temperature phase superconductor (Hg-1223) of the tetragonal structure didn't change with the partial substitution of Zn and Ag ions , lattice parameters c ,c/a are established to vary with Ag and Zn- substitution. The surface morphology has been studied by using atomic force microscopes (AFM), showed that all specimens have good crystalline and homogeneous surface. Also give a best nano size value is 75.72 nm at x=0.05 and y=0.3. Four probe technique is used to measure Tc. The Tc were found to be increases from 129 K to 147 K and oxygen content were found to be increases with increasing Zn. In addition, dielectric properties (dielectric constant, dielectric loss factor, and the alternating electrical conductivity) are characterized directly by relating with Ag and Zn concentration.

IOP Publisher Volume

Scope	Physics	Paper No.	100	Contribution	Oral

Investigation of Corrosion Protection in Oil Mineral Reservoirs by Nanocomposites Used as Coating Layers

Abdulhameed R Al-Sarraf and Samer A Al-Saaidi
Physics Department, College of Education for Pure Science Ibn Al-Haitham, University of Baghdad
Samerhawk@gmail.com

Abstract

In this study, a number of nanocomposites were prepared by adding magnesium oxide (MgO) with weight percentages (1, 2 & 3)% to cellulose nitrate and sodium silicate as an intermediate layer and other nanocomposites by adding MgO, coal coke and hybrid (MgO & coal coke with ratio 1:1) with weight percentages (1, 2 & 3)% to epoxy resin as final layer. The identity of the used metal is determined by spectrometer OE thermo. The nature and topography of the surface layers were examined by optical microscope and atomic force microscope (AFM). Mechanical properties are indicated by hardness, wear rate, impact strength and adhesion strength. The efficiency of the layers prepared to inhibit corrosion in the oil mineral reservoirs of the oil products distribution company was studied by electrochemical corrosion test in addition to the chemical corrosion test. The used metal is (St-37) according to (ASTM). It was found that the best intermediate layer (cellulose nitrate+3%MgO) and the final layer is the epoxy resin reinforced by 2% hybrid.

IOP Publisher Volume

Scope	Physics	Paper No.	155	Contribution	Oral

Preparation and characterization of copper oxide nanoparticles decorated carbon nanoparticles using laser ablation in liquid

K S Khashan1, M S Jabir2, F A Abdulameer 1, 2

1Department of Applied Science, Division of Laser Physics, University of Technology, Baghdad, Iraq.

2Department of Applied Science, Division of Biotechnology, University of Technology, Baghdad, Iraq.

1,2 eng.farahabdulkareem89@gmail.com

Abstract

Carbon nanoparticles CNPs ecorated by copper oxide nano-sized particles would be successfully equipped using technique named pulsed laser ablation in liquid. The XRD pattern proved the presence of phases assigned to carbon and different phases of copper oxide. The chemical structure of the as-prepared nanoparticles samples was decided by Energy Dispersive Spectrum (EDS) measurement. EDS analysis results show the contents of Carbon, Oxygen and Copper in the final product. These nanoparticles were spherical shaped with a size distribution 10 to 80 nm or carbon nanoparticles and 5 to 50 nm for carbon decorated copper oxide nanoparticles, according to Transmission Electron Microscopy (TEM) images and particle-size distribution histogram. It was found that after doping with copper oxide, nanoparticles become smaller and more regular in shape. Optical absorption spectra of prepared nanoparticles were measured using UV–VIS spectroscopy. The absorption spectrum of carbon nanoparticles without doping indicates absorption peak at about 228 nm. After doping with copper oxide, absorption shows appearance of new absorption peak at about (254-264) nm, which is referred to the movement of the charge between 2p and 4s band of Cu2+ ions.

IOP Publisher Volume

Scope	Physics	Paper No.	327	Contribution	Oral

Doping And Annealing Effect On Evaporation Of ZnO Thin Films

Auday H Shaban*, Samir A. maki, Shahd A. hussain,
Department of physics/ College of Education For Pure Science (Ibn Al-Haitham), University of Baghdad, Baghdad, Iraq
1 auday.h.s@ihcoedu.uobaghdad.edu.iq

Abstract

The present study carried out to show the structure and optical properties of doped ZnO:Sn thin films that have been deposition on a glass substrate by thermal evaporation (using Zn metal). The percentage of dopant is (3, 5, 7, & 9)%. The annealing temperature was 200 oC fixed for one hour annealing time. The result of XRD shows the presence of (100), (002) and (101) are the diffraction peaks of all thin films. The crystalline size was found to be increased with Sn doping. The FWHM values of the peaks were found to increase with doping. The direct optical band gap was calculated and found to be (3.24, 3.21, 3.2, 2.72, 2.88) e.V for pure and doped thin films respectively.

IOP Publisher Volume

Scope	Physics	Paper No.	230	Contribution	Oral

The Effect of Multi Wall Carbon Nanotubes on Some Physical Properties of Epoxy Matrix

Tagreed M. Al-Saadi 1, Suad hammed Aleabi 1, Entisar E. Al-Obodi 2, Hadeel Abdul-Jabbar Abbas 1

1 Department of physics, College of Education for Pure Sciences – Ibn Al-Haitham, University of Baghdad ,Iraq

2 Department of Chemistry, College of Education for Pure Sciences – Ibn Al-Haitham, University of Baghdad ,Iraq

E-mail: tagreedmm2000@gmail.com

Abstract

This research involves using epoxy resin as a matrix for making a composite material , while the multi wall carbon nanotubes (MWNCTs) is used as a reinforcing material with different fractions (0.0,0.02 , 0.04 , 0.06) of the matrix weight.

The mechanical (hardness), electrical (dielectric constant , dielectric loss factor , dielectric strength , electrical conductivity) , and thermal properties (thermal conductivity) were studied . The results showed the increase of hardness, thermal conductivity , electrical conductivity and break down strength with the increase of MWCNT concentration , but the behavior of dielectric loss factor and dielectric constant is opposite that.

IOP Publisher Volume

Scope	Physics	Paper No.	172	Contribution	Oral

Preparing and Study the effects of Composite Coatings in Protection of Oil Pipes from the Risk of Corrosion that resulting from Associated water with Petroleum Products

A R Al – Sarraf 1 , M A Yaseen 1

1University of Baghdad collage of Education For Pure Science-Ibn Al Haitham Baghdad-Iraq

E-mail :MO_199345@yahoo.com

Abstract

In order to inhibit the metallic corrosion in the oil pipelines,the protection method with composite coating of Unsaturated polyester and reinforced by Caolin at weight percentage (20%) was studied .where, the work samples were classified into two groups according to internal composite coatings layers for all group of these samples.The first group is nitrocellulose coating reinforced by nano and Micro Powder of Mgo ,The Second group is sodium silicate coating reinforced by nano powder of Mgo ,The following weight percentages (0%,1%,3% and5%) were adopted as reinforcement ratios for nano powders,as well as the weight percentages (0%,3%,5% and7%) as reinforcement ratios for micro powders Tribology properties and Electrochemical Corrosion Resistance by Polarization method (Tafel) and Adhesion Strength were studied, The results showed an improvement in the corrosion resistance of protected steel by coatings compare with uncoated steel, As well as improvement in mechanical properties and adhesion strength of composite coatings.

IOP Publisher Volume

Scope	Physics	Paper No.	210	Contribution	Oral

Study of the effect of electromagnetic fields on indoor and outdoor radon concentrations

Lina M Haider 1, N R Shareef1, H H Darwoysh 2 and H L Mansour 2

1University of Baghdad, College of Education for pure sciences, Ibn Al-Haitham, Baghdad, Iraq

2 Physics Department, College of Education, University of Al- Mustansiriyah, Baghdad, Iraq

Corresponding author: Lina Majeed Haider: linamh_1978@yahoo.com

Abstract

In the present work, the effect of electromagnetic fields produced by high voltage power lines(132kV) and indoor equipments on the indoor and outdoor average radon concentrations in Al-Kazaliya and Hay Al-Adil regions in Baghdad city were studied using CR-39 track detectors and a gauss-meter.Results of measurements of the present study, have shown that the highest value for the indoor average radon concentration (76.56± 8.44 Bq/ m3) was recorded for sample A1(Hay Al-Adel) at a distance of (20 m) from the high voltage power lines , while the lowest value for the indoor average radon concentration (30.46 ± 8.44 Bq/ m3) was recorded for sample A3 (Hay Al-Adil) at a distance of (50 m) from the high voltage power lines. The indoor gaussmeter measurements were found to be ranged from (30.2 mG) to (38.5 mG). The higest value for outdoor average radon concentration and the highest gaussmeter measurements were found for sample (1), with values (92.63 ±11.2 Bq/ m3) and (87.24 ± 2.85 mG), directly under the high voltage power lines respectively, while the lowest outdoor average radon concentration and the lowest gaussmeter measurements were found in sample (4),with values (34.19 ± 6.33 Bq/ m3) and (1.16 ± 0.14 Bq/ m3),), at a distance of (120 m) from the high voltage power lines respectively. The results of the present work have shown that there might be an influence of the electromagnetic field on radon concentrations in areas which were close to high voltage power lines and houses which have used many electric equipment for a long period of time.

IOP Publisher Volume

Scope	Physics	Paper No.	79	Contribution	Oral

Photoluminescence Spectra From The Direct Energy Gap of a-SiQDs

Nidhal M. Abdul-Ameer1, Moafak C. Abdulrida2, Shatha M. Abdul-Hakeem3
1Department of Physics,College of Education for pure Science (Ibn Al-Haitham), University of Baghdad, adamiayh, Baghdad, Iraq.
2Department of Laser and Optoelectronics Engineering, Kut College University, Wasit, Iraq.
3Department of Physics,College of Science, University of Baghdad, Baghdad-Iraq.
1dr.nidhalmoosa@gmail.com, 2moafak.c.1950@ieee.org

Abstract

A theoretical model for radiative recombination in amorphous silicon quantum dots (a-SiQDs) was developed. In this model, for the first time, the coexistence of both spatial and quantum confinements were considered. Also, it is found that the photoluminescence exhibits significant size dependence in the range (1-4) nm of the quantum dots. a-SiQDs show visible light emission peak energies and high radiative quantum efficiency at room temperature ,in contrast to bulk a-Si structures. The quantum efficiency is sensitive to any change in defect density (the volume nonradiative centers density and/or the surface nonradiative centers density) but, with small dots sizes, the quantum efficiency is insensitive to such defects. Our analysis shows that the photoluminescence intensity increases or decreases by the effect of radiative quantum efficiency. By controlling the size of a-SiQDs, we note that the energy of emission can be tuned. The blue shift is attributed to quantum confinement effect. Meanwhile, the spatial confinement effect is clearly observed in red shift in emission spectra. we found a good agreement with the experimental published data. Therefore, we assert that a-SiQDs material is a promising candidate for visible, tunable, and high performance devices of light emitting.

IOP Publisher Volume

Scope	Physics	Paper No.	191	Contribution	Oral

Interaction of (O,Ar)ions with Prostate tissue

Dr. Bashair Mohammed Saied1 , Saad Nafea Yaqoob2

1Department of Physics / College of Education Ibn Al-Haitham for Pure Science University of Baghdad –Iraq2Ministry of Education.

Abstract

The use of Ion beam in cancer therapy allows an accurate irradiation of the tumor with minimum collateral damage in surrounding healthy tissue, for this purpose we calculate the energy loss for (O,Ar) ions beams with (prostate tissue) in energy rang(0.001-200) MeV using different theoretical and semi-empirical formulation.The stopping power values calculated using semi-empirical approaches SRIM ,CaSP and SRIM Dictionary compound.

IOP Publisher Volume

Scope	Physics	Paper No.	166	Contribution	Oral

Novel Relationship among Spiral Arm Pitch Angles (p) and momentum parameter of the host spiral galaxies

Ismaeel Al-Baidhany1,2, Hayfa G Rashid1,3 , Sami S Chiad1,4, Nadir F Habubi1,5, Nidhal N Jandow1,6, Wasmaa A Jabbar1,7, khalid H Abass2,1

1Department of Physics, College of Education, Mustansiriyah University, Baghdad, Iraq

2Department of Physics, College of Education for Pure Sciences, University of Babylon, Iraq,

1,2ismaeel_2000@uomustansiriyah.edu.iq, 1,3dr.hayfa@uomustansiriyah.edu.iq, 1,4dr.sami@uomustansiriyah.edu.iq, 1,5nadirfadhil@uomustansiriyah.edu.iq, 1,6nidhaljandow@uomustansiriyah.edu.iq, 1,7wasmaajabbar@uomustansiriyah.edu.iq, pure, 2,1khalid.haneen@uobabylon.edu.iq

Abstract

In this study, we have found a novel relationship among spiral arm pitch angles (p) and momentum parameter of the host spiral galaxies. In this study, we measured the momentum parameter for specimen of Spitzer/IRAC 3.6 μm images of 41 spiral galaxies evaluated employing a relation(Mbulge σ*/c)where Mbulge is mass of the bulge and σ* is the stellar velocity dispersion. We have taken velocity dispersions (σ*) from the literature. In order to determine the spiral arm pitch angles. The selection of specimen of nearly face-on spiral galaxies and employ IRAF ellipse to indicate the ellipticity and major-axis position angle so as to deproject the images to face-on, employing 2D Fast Fourier Transform decomposition mehtod. The specified bulge mass (Mbulge) using the virial theorem was include.

IOP Publisher Volume

Scope	Physics	Paper No.	139	Contribution	Oral

Effects of FeCl3 additives on optical parameters of PVA

Duha M A Latif1, Sami S Chiad2, Muhssen S Erhayief2, Khalid H Abass3, Nadir F Habubi2, Hadi A Hussin2

1Department of Physics, Education for Pure Sciences, Baghdad University, Baghdad, Iraq,2Department of Physics, College of Education, Mustansiriyah University, Baghdad, Iraq ,3Department of Physics, College of Education for Pure Sciences, University Babylon, Babylon, Iraq

2dr.sami@uomustansiriyah.edu.iq, dr.muhssensalbookh@uomustansiriyah.edu.iq, 3pure.khalid.haneen@uobabylon.edu.iq,nadirfadhil@uomustansiriyah.edu.iq, 2hadi.ahmed@uomustansiriayh.edu.iq

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Abstract

PVA doped FeCl3 have been deposited utilizing casting technique. Absorption spectrum was registered in the wavelengths (300-900 nm) utilizing UV-Visible spectrophotometer. Optical constants behavior such as, absorbance, absorption coefficient, and skin depth were studied. It was found these parameters were increased as Fe content increase. While the extinction coefficient and optical conductivity was decreased. The energy gap of PVA-Fe films were decreased from 4 eV for the PVA film to 3.5 eV for the PVA: 4 % Fe film.

IOP Publisher Volume

Scope	Physics	Paper No.	40	Contribution	Oral

Experimental study of some shielding parameters for composite shields

Ahmed F Mkhaiber 1 , Abdulraheem Dheyaa 1
1 Department of Physics – College of Education for Pure sciences Ibn AlHaitham University of Baghdad Iraq
ahmfad2002@yahoocom

Abstract

In this study radiation protection shields have been prepared consist of composite materials have epoxy as a basis material and different reinforcing materials C Ni PbO and Bi with various reinforcing ratios 10 20 30 40 50 % and dimensions 1 ×10 ×10 cm For examination the suitability of using this shields to protect from gamma ray some shielding parameters were calculated like Linear attenuation coefficient μ Effective atomic numberZeffe Heaviness and half value thickness X1/2 for energy rang 1218 – 1480 KeV These parameters have been measured by using sodium iodide system NaITI with deferent radiation sources 152Eu 60Co and 137CsThe results show that this parameters are effected by the reinforcing ratio and gamma ray energy it is found the linear attenuation coefficient and atomic effective number increases with reinforcing ratio increases and decreased with energy increasing especially with high concentrations 40 50 % and at low energies E_γ < 0662 MeV with certain energy while the values of X1/2 is decrease with reinforcing ratio increases Heaviness was calculated too for all shields with respect to lead from its values we found that this shields lighter than lead which make it preferable to traditional material such as lead and concrete

IOP Publisher Volume

Scope	Physics	Paper No.	22	Contribution	Oral

Fabrication & Characterization of AIAS/pSi Heterojunction Solar Cell

Hanan K Hassun1, Auday H Shaban, Ebtisam M T Salman
Department of physics College of Education For Pure Science Ibn AlHaitham University of Baghdad Baghdad Iraq
hanan.kadhem@yahoo.com

Abstract

Silver Indium Aluminum Selenium AgIn1xAlxSe2 AIAS for x=01 thin films was deposited by thermal evaporation at RT and different1thickness 100 150 and 200 nm on the glass Substrate and p2Si wafer to produce AIAS/p3Si heterojunctionsolarcell4 Structural optical electrical and photovoltaicproperties6 are investigated for the samples XRD analysis reveals that all the deposited AIAS films show polycrystalline structure without any change due to increase of thickness Average diameter and roughness calculated from AFM images shows an increase in its value with increasing thickness The optical absorbance and transmittance for samples are measured using a spectrometer type UV Visible 1800 spectra1photometer to study the energy6gap The electricalproperties7of heterojunction were obtained by IV8 dark and illuminated9 and C10Vmeasurement The ideality1 factor and the saturation2current density were calculated Under illuminated3the open circuit voltage Voc4 short circuit current density Jsc6 fill factor 6FF and quantum efficiencies were calculated The builtin potential 7Vbi carrier concentration and depletion width are measured with different9 thickness

IOP Publisher Volume

Scope	Physics	Paper No.	181	Contribution	Oral

Design of Magnetic Charged Particle Lens Using Analytical Potential Formula

A H Al-Batat 1, M J Yaseen 1, S R Abbas 1, M S Al-Amshani 1 and H S Hasan 2

1Department of Physics, College of Education, Mustansiriyah University, P.O.Box:46219, Baghdad, Iraq.

2Department of Physiology and Medical Physics, College of Medicine, Al-Nahrain University, P.O. Box: 70044, Kadhimiya, Baghdad, Iraq.

Abstract

In the current research was to benefit from the potential of the two cylindrical electric lenses to be used in the product a mathematical model from which, one can determine the magnetic field distribution of the charged particle objective lens. With aid of simulink in matlab environment, some simulink models have been building to determine the distribution of the target function and their related axial functions along the optical axis of the charged particle lens. The present study showed that the physical parameters (i.e., the maximum value, Bmax, and the half width W of the field distribution) and the objective properties of the charged particle lens have been affected by varying the main geometrical parameter of the lens named the bore radius R.

IOP Publisher Volume

Scope	Physics	Paper No.	240	Contribution	Oral

Effect of Electrical Current Stimulation on Pseudomonas Aeruginosa Growth

Auns Q Alneami1, Eman G Khalil2, Rana A. Mohsien3 and Ali F. Albeldawi4,5
1,2,4Department of Biomedical Engineering, Al-Nahrain University, Baghdad, Iraq.
3College of biotechnology, Al Nahrain University, Baghdad, Iraq.
5Author to whom any correspondence.
E-Mail: uns_alneami@yahoo.com1 , dr.emankhalil@yahoo.com 2 , rana1980@yahoo.com 3 , ali_faisal79@yahoo.com 4

Abstract

The present study evaluates the effect of electrical current with different frequencies stimulation to kill pathogenic Pseudomonas aeruginosa (PA) bacteria in vitro using human safe level of electricity controlled by function generator. A wide range of frequencies has been used from 0.5 Hz-1.2 MHz to stimulate the bacteria at a voltage of 20 p-p volt for different periods of time (5 to 30) minutes. The culture of bacteria used Nickel, Nichrome, or Titanium electrode using agarose in phosphate buffer saline (PBS) and mixed with bacterial stock activated by trypticase soy broth (TSB). The results of frequencies between 0.5-1 KHz show the inhibition zone diameter of 20 mm in average at 30 minutes of stimulation. At frequencies between 3-60 KHz the inhibition zone diameter was only 10mm for 30 minutes of stimulation. While the average of inhibition zone diameter increased to more than 30mm for 30 minutes of stimulation at frequencies between 80-120 KHz. From this study we conclude that at specific frequency (resonance frequency) (frequencies between 0.5-1 KHz) there was relatively large inhibition zone because the inductive reactance effect is equal to the value of capacitive reactance effect (XC = XL). At frequencies over than 60 KHz, maximum inhibition zone noticed because the capacitance impedance becomes negligible (only the small resistivity of the bacterial internal organs).

IOP Publisher Volume

Scope	Physics	Paper No.	285	Contribution	Oral

Mathematical Calculations Of Heat Transfer For The CNC Deposition Platform Based On Chemical Thermal Method

Mohammed Sh. Essa1, Bahaa T. Chiad2, Khalil A. Hussein1

1 Ministry of Science and Technology, Renewable Energy Directorate, Solar Energy Research Center, Iraq, Baghdad

2 University of Baghdad, College of Science, Dept. of physics, Iraq, Baghdad

mohalnasban@yahoo.com

Abstract

Chemical thermal deposition techniques are highly depending on deposition platform temperature as well as surface substrate temperatures, so in this research thermal distribution and heat transfer was calculated to optimize the deposition platform temperature distribution, determine the power required for the heating element, to improve thermal homogeneity. Furthermore, calculate the dissipated thermal power from the deposition platform. Moreover, the thermal imager (thermal camera) was used to estimate the thermal destitution in addition to, the temperature allocation over 400cm2 heated plate area. In order to reach a plate temperature at 500 oC, a plate supported with an electrical heater of power (2000 W). Stainless steel plate of 12mm thickness was used as a heated plate and deposition platform and subjected to lab tests using element analyzer X-ray fluorescence system (XRF) to check its elemental composition and found the grade of stainless steel and found to be 316 L. The total heat losses calculated at this temperature was 612 W. Homemade heating element was used to heat the plate and can reach 450 oC with less than 15 min as recorded from the system.as well as the temperatures recorded and monitored using Arduino/UNO microcontroller with cold-junction-compensated K-thermocouple-to-digital converter type MAX6675.

IOP Publisher Volume

Scope	Physics	Paper No.	4	Contribution	Oral

OLIFE: Tight Binding Code for Transmission Coefficient Calculation

Zainelabideen Yousif Mijbil12

1) Chemistry and Physiology Department AlQasim Green University AlQasim Town Babylon Iraq

z) Hillah Babylon Iraq P O Box 385

zymijbil0@gmail.com , zymijbil@vetuoqasimeduiq

Abstract

A new and humanfriendly transport calculation code has been developed It requires a simple tight binding Hamiltonian as the only input file and uses a convenient graphical user interface to control calculations The effect of magnetic field on junction has also been included Furthermore the transmission coefficient can be calculated between any two points on the scatterer which ensures high flexibility to check the system Therefore Olife can highly be recommended as an essential tool for pretesting studying and teaching electron transport in molecular devices that saves a lot of time and efforts

IOP Publisher Volume

Scope	Physics	Paper No.	271	Contribution	Oral

Effect of time variation on coating characteristic of Ti-6Al-4V alloy coated with TiO2 by dip coating method

Shaymaa Hashim Aneed

Collage of Education / pure science, Physics Department, University of Baghdad/ Ibn Al- Haitham collage, Baghdad / Iraq.

shaimaahasheem1977@gmail.com

Abstract

In this reserch samples of Ti-6Al-4V alloy was coated with TiO2 layer by dip coating method in solution consist of 8 gm TiO2 nanoparticle dissolved in 100 ml. ethanol absolute (99%) and 1 gm P2O5, with various coating periods (1,2,3) minuts .The corrosion characteristics was investigated using (parstat 2273,USA made) ,the corrosion rate reach to7.047 × 10-4 mm/y for sample coated at 3 minutes compared with 8.266 × 10-3mm/y for uncoated sample . Then the samples immersed in simulated body fluid (SBF) synthesized in the laboratory for one month in order to investigate the osseointegration from hydroxyapatite biomimaticallyformed , the corrosion charactaristics also invistigated after immirsing in (SBF) and it was 1.479 × 10-4 mm/y . For each part of reaserch we test the optical microscopic images ,XRD and SEM in order to evaluate the results.

IOP Publisher Volume

Scope	Physics	Paper No.	30	Contribution	Oral

Study electron transport coefficients for Ar, O_2 and their mixtures by using EEDF program

D S Abdul Majeed 1,B J Hussein1, M K Jassim 1

1Physics Department College of Education for Pure Science Ibn AL Haitham University of Baghdad

drbushrahussam@yahoocom

Abstract

We calculated the electron transport coefficient in Ar, O_2 and their mixtures for ratio of E/N where E denotes the electric field and N the density of gas atoms from $5-600$ Td $1\text{Td} = 10^{-17}\ \text{V.cm}^2$ The result and parameters mean energy mobility drift velocity and others are calculated by solving Boltzmann equation We study these gases because of its importance in thermal plasma such as shielding gas for arc welding of metals and alloys These results are useful to find best gas mixtures to reach appropriate transport parameter and to derive the same relevant cross section data

IOP Publisher Volume

Scope	Physics	Paper No.	302	Contribution	Oral

Radon Concentration And Dose Assessment In Well Water Samples From Karbala Governorate Of Iraq

I T Al-Alawy1 and A A Hasan2

1,2Al-Mustansiriyah University, College of Science, Department of Physics

profimantarik@gmail.com1

Abstract

There are numerous studies around the world about radon concentrations and their risks to the health of human beings. One of the most important social characteristics is the use of water wells for irrigation, which is a major source of water pollution with radon gas. In the present study, six well water samples have been collected from different locations in Karbala governorate to investigate radon concentration level using CR-39 technique. The maximum value 4.112±2.0Bq/L was in Al-Hurr (Al-Qarih Al-Easariah) region, and the lowest concentration of radon was in Hay Ramadan region which is 2.156±1.4Bq/L, with an average value 2.84±1.65Bq/L. The highest result of annual effective dose (AED) was in Al-Hurr (Al-Qarih Al-Easariah) region which is equal to 15.00±3.9μSv/y, while the minimum was recorded in Hay Ramadan 7.86±2.8μSv/y, with an average value 10.35±3.1μSv/y. The current results have shown that the radon concentrations in well water samples are lower than the recommended limit 11.1Bq/L and the annual effective dose in these samples are lower than the permissible international limit 1mSv/y.

IOP Publisher Volume

Scope	Physics	Paper No.	81	Contribution	Oral

Design and Simulation of Surface Plasmon Resonance Sensors for Environmental Monitoring

Aseel I Mahmood1,2, Rawa Kh Ibrahim1, Aml I Mahmood2, Zainab Kh Ibrahim3

1Material Research Directorate, Ministry of Science and Technology, Baghdad, Iraq
2Middle Technical University, Electrical Engineering Technical College, Baghdad, Iraq
3Mayoralty of Baghdad, Baghdad Water Authority Lab. And Q.C. Department, Baghdad, Iraq
1,2E-mail: aseelibrahim208@gmail.com

Abstract

In this work a Surface Plasmon Resonance (SPR) sensor based on Photonic Crystal Fiber (PCF) infiltrated with water samples has been proposed. To accurate detection of the sample properties, gold is used as plasmonic material. The air holes of PCF has been infiltrated with water samples, the optical properties of these samples has been taken from samples collected from Al- Qadisiya and Wathba lab. (east Tigris, Wathba, and Al-Rasheed) water projects at Baghdad- Iraq. Finite Element Method (FEM) has been used to study the sensor performance and fiber properties. From the numerical investigation we get maximum sensitivity circa 164.3 nm/RIU in the sensing range of 1.33 (of STD water) to 1.3431 (of river sample). The proposed sensor could be developed to detect f various high refractive index (RI) chemicals like the heavy metals in water.

IOP Publisher Volume

Scope	Physics	Paper No.	162	Contribution	Oral

Theoretical estimation of Photons flow rate Production in quark gluon interaction at high energies

Hadi J. M. Al-Agealy1 ,Hyder Hamza Hussein 2 ,Saba Mustafa Hussein 3

1Department of Physics, College of Education for pure Science, Baghdad University, Baghdad, Iraq.

2Department of Physics, College of Science, Kufa University, Iraq.

3Ministry of Education.

Abstract

Photons emitted from higher energetic collisions in quark-gluon system have been theoretical studied depending on color quantum theory . A simple model for photons emission at quark-gluon system have been investigated . In this model, we use a quantum consideration which enhances to describing the quark system. The photons current rate are estimation for two system at different fugacity coefficient . We discussion the behavior of photons rate and quark gluon system properties in different photons energies with Boltzmann model. The photons rate depending on anisotropic coefficient : strong constant, photons energy, color number, fugacity parameter, thermal energy and critical energy of system are also discussed.

IOP Publisher Volume

Scope	Physics	Paper No.	234	Contribution	Oral

Influence of Temperature on Nanosecond Pulse Amplification in Thulium Doped Fiber Lasers

Ali Abdulfattah1,2*, Stefan Gausmann1, Alex Sincore1, Joshua Bradford1, Nathan Bodnar1,2, Justin Cook1, Lawrence Shah1,3 And Martin Richardson1

1Laser Plasma Laboratory, College of Optics & Photonics, University of Central Florida, 4304 Scorpius Street, Orlando, FL 32816, USA.

2Department of Electrical Engineering & Computer Science, University of Central Florida.

3Luminar Technologies, Inc., 12601 Research Parkway, Orlando, FL 32826, USA.

**Correspond Author email: aqa@creol.ucf.edu*

Abstract

Thulium silica doped fiber (TDF) lasers are becoming important laser sources in both research and applications in industry. A key element of all high-power lasers is thermal management and its impact on laser performance. This is particularly important in TDF lasers, which utilize an unusual cross-relation pumping scheme, and are optically less efficient than other types of fiber lasers. The present work describes an experimental investigation of thermal management in a high power, high repetition-rate, pulsed Thulium (Tm) fiber laser. A tunable nanosecond TDF laser system across the 1838 nm – 1948 nm wavelength range, has been built to propagate 2μm signal seed pulses into a TDF amplifier, comprising a polarized large mode area (PLMA) thulium fiber (TDF) with a 793nm laser diode pump source. The PLMA TDF amplifier is thermally managed by a separately controlled cooling system with a temperature varied from 12ºC to 36ºC. The maximum output energy (~400 μJ), of the system is achieved at 12ºC at 1947 nm wavelength with ~32 W of absorbed pump power at 20 kHz with a pulse duration of ~ 74 ns.

IOP Publisher Volume

Scope	Physics	Paper No.	48	Contribution	Oral

Antibacterial Activity Of ternary semiconductor compounds AgInSe2 Nanoparticles Synthesized by Simple Chemical Method

A A Shehab1, S A Fadaam2 ,A N Abd3, M H Mustafa1

1Department of physics/ College of Education For Pure Science Ibn AlHaitham University of Baghdad Baghdad Iraq

2Ministry of EducationDirectorate General for Education Baghdad ALRusafa /1 Baghdad Iraq

3Physics Department Collage of Science Al Mustansiriyah University/ Baghdad/ Iraq

Abstract

In this objectiveeAgInSe2Nanoparticles AgInSe2 NPs were prepared by a Simple chemical methoddSCM The optica structural l and morphological properties of the synthesized AgInSe2 NPs swere investigated by using UVVI absorption atomic force microscopy AFMmfFourier TransformInfrared Spectroscopy and xray diffractionn The resistance of bacteria represents a trouble and the outlook for the use of antibiotics in the future until now uncertain It must be taken measures to decrease this problem antibacterial activity of the AgInSe2 nanoparticles were exposed against several pathogenic bacteriaa including Klebsiella pneumonia KPa Staphylococcus aureus Bacillus subtili Enterobacter Cloacae and Esherichia Coliby using a good spread method the results showed that AgInSe2 NPs had inhibitory effect versus some pathogenic bacteria with suppression area 18 18 14 and 17 mm for SAgInSe2 NPs had an inhibitory effect against S Bacillus Subtilis 11 mm K EnterobactercCloacae 12 mm

IOP Publisher Volume

Scope	Physics	Paper No.	125	Contribution	Oral

Theoretical Discussion of Electron Transport Rate Constant at TCNQ / Ge and TiO2 System

Hadi J M Al-agealy1, B Alshafaay2, Mohsin A Hassooni1, Ahmed M Ashwiekh1 Abbas K Sadoon1, Raad H Majeed1, Rawnaq Q Ghadhban1, Shatha H Mahdi1

1Department of Physics, College of Education for pure science, Ibn Al-Haitham, Baghdad of University

2Department of Physics, College of Education, Kerbala of University.

Abstract

We have been studying and estimation the electronic transport constant at TCNQ / Ge and Tio2interface by means of tunneling potential (TP), transport energy reorientation (TER) , driving transition energy DTE and coupling coefficient constant. A simple quantum model for the transition processes was adapted to estimation and analysis depending on the quantum state for donor state$|\alpha_D>$ and acceptor state$|\alpha_A>$ and assuming continuum levels of the system. Evaluation results were performed for the surfaces of Ge and Tio2as best as for multilayer TCNQ. The results show an electronic transfer feature for electronic TCNQ density of states and a semiconductor behavior. The electronic rate constant result for both systems shows a good tool to election system in applied devices. All these results indicate the

IOP Publisher Volume

Scope	Physics	Paper No.	131	Contribution	Oral

Hiding Information Using different lighting Color images

Ahlam Majead1, Rash Awad2, Salema S Salman3

1Dep. of Physics /College of Science / University of Al- Mustansiriyah.
2Dep. of Computer/College of Basic Education/ University of Al- Mustansiriyah.
3Dep. of Clinical Laboratory Science/College of Pharmacy/ University of Baghdad.

Abstract

The host medium for the secret message is one of the important principles for the designers of steganography method. In this study, the best color image was studied to carrying any secret image.The steganography approach based Lifting Wavelet Transform (LWT) and Least Significant Bits (LSBs) substitution. The proposed method offers lossless and unnoticeable changes in the contrast carrier color image and imperceptible by human visual system (HVS), especially the host images which was captured in dark lighting conditions.The aim of the study was to study the process of masking the data in colored images with different light intensities. The effect of the masking process was examined on the images that are classified by a minimum distance and the amount of noise and distortion in the image. The histogram and statistical characteristics of the cover image the results showed the efficient use of images taken with different light intensities in hiding data using the least important bit substitution method. This method succeeded in concealing textual data without distorting the original image (low light) Lire developments due to the concealment process.The digital image segmentation technique was used to distinguish small areas with masking. The result is that smooth homogeneous areas are less affected as a result of hiding comparing with high light areas. It is possible to use dark color images to send any secret message between two persons for the purpose of secret communication with good security.

IOP Publisher Volume

Scope	Physics	Paper No.	158	Contribution	Oral

Enhance Video Film using Retnix method

Rasha Awad 1, Ali A. Al-Zuky 2, Anwar H. Al-Saleh 3 and Haidar J. Mohamad 2
1 Computer Department, College of Basic Education, Mustansiriyah University, Baghdad, Iraq
2 Physics Department, College of Science, Mustansiriyah University, Baghdad, Iraq
3 Computer Department, College of Science, Mustansiriyah University, Baghdad, Iraq
1rashaheart_2005@yahoo.com ,prof.alialzuky@yahoo.com ,
anwar.alsaleh10@gmail.com , haidar_jawad2001@yahoo.com

Abstract

An enhancement technique used to improve the studied video quality. Algorithms like mean and standard deviation are used as a criterion within this paper, and it applied for each video clip that divided into 80 images. The studied filming environment has different light intensity (315, 566, and 644Lux). This different environment gives similar reality to the outdoor filming. The outputs of the suggested algorithm are compared with the results before applying it. This method is applied into two ways: first, it is applied for the full video clip to get the enhanced film; second, it is applied for every individual image to get the enhanced image then compiler them to get the enhanced film. This paper shows that the enhancement technique gives good quality video film depending on a statistical method, and it is recommended to use it in different application.

IOP Publisher Volume

Scope	Physics	Paper No.	258	Contribution	Oral

Structural properties different between two types of PE subjected to heat treatment

May Abdul Sattar Mohammed Najeeb , Kareem A. Jasim and Dr. Nabil N. Rammo

Collage of Education / pure science, Physics Department, University of Baghdad/ Ibn Al-Haitham collage, Baghdad / Iraq.

Abstract

In this study two modifications of polyethylene white (Pure one) and blue which is prepared with CaCo3 stabilized from polyethylene's tunnel have been studied by (XRD) subject to different temperatures at heat treatment. Both specimens show difference in the scattered X-ray intensity of the basal planes (110) and (200) with changing of the heat treatment.The degree of crystallinity of both modification of polyethylene (PE) has been studied. It has been looked that the white type is better than the blue type.

IOP Publisher Volume

Scope	Physics	Paper No.	254	Contribution	Oral

Investigation of Corrosion Protection in Oil Mineral Reservoirs by Nanocomposites Used as Coating Layers

Abdulhameed R Al-Sarraf , Samer A Al-Saaidi
Physics Department, College of Education for Pure Science Ibn Al-Haitham, University of Baghdad
Samerhawk@gmail.com

Abstract

In this study, a number of nanocomposites were prepared by adding magnesium oxide (MgO) with weight percentages (1, 2 & 3)% to cellulose nitrate and sodium silicate as an intermediate layer and other nanocomposites by adding MgO, coal coke and hybrid (MgO & coal coke with ratio 1:1) with weight percentages (1, 2 & 3)% to epoxy resin as final layer. The identity of the used metal is determined by spectrometer OE thermo. The nature and topography of the surface layers were examined by optical microscope and atomic force microscope (AFM). Mechanical properties are indicated by hardness, wear rate, impact strength and adhesion strength. The efficiency of the layers prepared to inhibit corrosion in the oil mineral reservoirs of the oil products distribution company was studied by electrochemical corrosion test in addition to the chemical corrosion test. The used metal is (St-37) according to (ASTM). It was found that the best intermediate layer (cellulose nitrate+3%MgO) and the final layer is the epoxy resin reinforced by 2% hybrid.

IOP Publisher Volume

Scope	Physics	Paper No.	105	Contribution	Oral

The effect of replaced recycled glass on thermal conductivity and compression properties of cement

A S khalil1, M A Mahmoud1, A AL-Hathal1, M K Jawad1, B M Mozahim1
Physics Department, College of Education for Pure Science (Ibn Al-Haitham), University of Baghdad, Iraq.
Asmaashawky67@yahoo.com

Abstract

This study deal with recycling of waste colorless glass bottles which are prepared as a powder and use them as an alternative for cement to save the environment from west and reduce some of cement(ceramic) damage and interactions with conserving physical properties of block concrete. Different weight percentage (0%, 2%, 4%, 5%, 6%, 8%, 10%, 15%, 20% and، 25%) of recycled glass bottle were use in this research to be replaced by a certain percentages of cement. Thermal conductivity was studied for prepared samples. Results show that the thermal conductivity decrease with the increase of weight percentage of glass powder comparing with the stander sample.

IOP Publisher Volume

Scope	Physics	Paper No.	331	Contribution	Oral

Utilizing Laser-Induced Breakdown Spectroscopy Method to recognize chemical composition of low-carbon steel in NH3(NO)4 material

Nissan Saud Oraibi
Physics Department, College of Science, Al-Nahrain Univ., Iraq.
nissansoud78@gmail.com

Abstract

A standoff laser Induced Break down Spectroscopy (L.I.B.S) technique has been used to characterization the organic materialsuch as NH3(NO)4, a Q-switched Nd:YAG laser (1064 nm wavelength, 9 ns pulse width and 1 Hz repetition rate, 300 mJ is focused to the targets to generate plasma. HR 4000 CG-UV-NIR spectrum analyzer was used to collect the generated plasmaemissions, specificsignature of each targets material can be obtained by analysis the plasma emission spectrum Peak ratio analysis technique is used for the identification of energetic materials.

IOP Publisher Volume

Scope	Physics	Paper No.	182	Contribution	Oral

The role of Tin Oxide Concentration on The X-ray Diffraction, Morphology and Optical Properties of In2O3:SnO2 Thin Films

Bushra A.Hasan , Rusul M.Abdallah
University of Baghdad , College of Science ,Department of Physics
bushra_abhasan@yahoo.com

Abstract

Alloys were performed from In2O3 doped SnO2 with different doping ratio by quenching from the melt technique. Pulsed Laser Deposition PLD was used to deposit thin films of different doping ratio In2O3 : SnO2 (0, 1, 3, 5, 7 and 9 % wt.) on glass substrate at ambient temperature under vacuum of 10-3 bar thickness of ~100nm. The structural type ,grain size and morphology of the prepared alloys compounds and thin films were examined using X-ray diffraction and atomic force microscopy . The results showed that all alloys have polycrystalline structures and the peaks belonged to the preferred plane for crystal growth were identical with the ITO (Indium – Tin – Oxide) standard cards also another peaks were observed belonged to SnO2 phase. The structures of thin films was also polycrystalline , and the predominate peaks are identical with standard cards ITO . On the other side the prepared thin films declared decrease a reduction of degree of crystallinity with the increase of doping ratio. Atomic Force Microscopy AFM measurements showed the average grain size and average surface roughness exhibit to change in systematic manner with the increase of doping ratio with tin oxide. The optical measurements show that the In2O3:SnO2 thin films have a direct energy gap Egopt in the first stage decreases with the increase of doping ratio and then get to increase with further increase of doping ration, whereas reverse to that the optical constants such as refractive index (n), extinction coefficient (k) and dielectric constant (εr, εi) have a regular increase with the doping ratio by tin oxide and then decreases.

IOP Publisher Volume

Scope	Physics	Paper No.	75	Contribution	Oral

Investigation of Corrosion Protection in Oil Mineral Reservoirs by Nanocomposites Used as Coating Layers

Abdulhameed R Al-Sarraf, Samer A Al-Saaidi*

Physics Department, College of Education for Pure Science Ibn-Al- Haithm, University of Baghdad

*Samerhawk@gmail.com

Abstract

In this study, a number of nanocomposites were prepared by adding magnesium oxide (MgO) with weight percentages (1, 2 and 3)% to cellulose nitrate and sodium silicate as an intermediate layer and other nanocomposite by adding MgO, coal coke and hybrid (MgO & coal coke with ratio 1:1) with weight percentages (1, 2 & 3)% to epoxy resin as final layer. The identity of the used metal is determined by spectrometer OE thermo. The nature and topography of the surface layers were examined by optical microscope and atomic force microscope (AFM). Mechanical properties are indicated by hardness, wear rate, impact strength and adhesion strength. The efficiency of the layers prepared to inhibit corrosion in the oil mineral reservoirs of the oil products Distribution Company was studied by electrochemical corrosion test in addition to the chemical corrosion test. The used metal is (St-37) according to (ASTM). It was found that the best intermediate layer (cellulose nitrate+3%MgO) and the final layer is the epoxy resin reinforced by 2% hybrid.