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أسم المادة الدراسية والمرحلة : الكيمياء العضوية النظري / المرحلة الثانية

المحاور الرئيسية لمادة الكيمياء العضوية النظري

Phenols

Nomenclature

Physical properties of phenols

Acidity of phenols

Preparation of phenols

Dow process

Alkali fusion of sulfonates

Hydrolysis of diazonium salt

Reactions of phenols

Sulfonation

Halogenation

Kolbe reaction

Rimer-tiemann reaction

Identified of phenol

Aldehydes and ketones

Nomenclature

Physical properties

Preparation of aldehydes

Oxidation of primary alcohols

Oxidation of toluene

reduction to alcohol

Reduction of acid chlorides

Preparation of ketones

Oxidation of secondary alcohols

Friedel- crafts acylation

Oxidation of alkene by ozone

nucleophilic addition

reduction amination

reduction to hydrocarbons

addition of cyanide to formation of cyanohydrins

addition of derivatives of ammonia

addition of alcohols to formation acetal and ketal

Cannizaro reaction

halogenation of ketones

Aldol condensation

dehydration of aldol products

Wittig reaction

Reformatsky reaction

Haloform reaction

Carboxylic acid

    Nomenclature

Di Carboxylic acid

Physical properties

Preparation of carboxylic acid

    Oxidation of primary alcohol

    Oxidation of alkylbenzene

    Carbonation of griniard reagents

    Hydrolysis of nitriles

    reactions of carboxylic acids

    Conversion into functional derivatives

    Conversion into esters

Conversion into amide

Reduction of carboxylic acid

Acidity of carboxylic acid

Acid chlorides

Conversion into acids

Conversion into amides

Preparation of acid anhydrides

Preparation of amides

Hofmann degradation of amides

Preparation of esters

reactions of esters

Amines

Physical properties of amines

Preparation amines

Hoffman degradation of amides

Reductive amination

reactions of amines

Basicity of amines

Diazonium salts , preparation and reactions

Azo compounds

Alkyl Halides

Structure and nomenclature

Physical properties

Preparation of alkyl halides

Reactions of alkyl halides

The SN1 mechanism

The SN2 mechanism

Mechanism E1 , E2

carbanion mechanism

Alcohols

Classification

Nomenclature

physical properties

Preparation of alcohols

المراجع

Organic chemistry Morrison and Boyd

الكيمياء العضوية المرحلة الثانية