

Contents:

Heterocyclic Chemistry: Introduction • Nomenclature • Pyrrole • Furan • Thiophene • Imidazole • Oxazole • Thiazole • Pyrazole • Isoxazole • Indole • Pyridine • Pyrimidine • Quinoline • Isoquinolines • Acridine • Azepines • Phenothiazine • Polynuclear Hydrocarbons: Introduction • Important reactions of diphenyl methane • Important reactions of triphenyl methane • Important reactions of naphthalene • Structure of naphthalene • Anthracene • Important reactions of anthracene • Important reactions of phenanthrene • Some Drugs Containing Certain Heterocycles and Polynuclear Hydrocarbons • Synthetic Tools: Beckmann rearrangement • Schmidt reaction • Meerwein-ponndorf-verley (MPV) reduction • Clemmensen reduction • Birch reduction • Catalytic hydrogenation • Darzen's reaction • Reiley reaction (Oxidation with selenium oxide) • Oxidation with mercuric acetate • Oxidation with lead tetra acetate • Oxidation with perchloric acid (HClO₄) • Reduction with hydrazine • Metal hydride reduction • Reduction by sodium borohydride (NaBH₄) • Fries rearrangement • Mannich reaction • Michael reaction • Stereo Chemistry: Introduction • Tetrahedral carbon atom • Elements of symmetry • Optical activity • Properties of racemic modification • Resolution or separation of racemic modification • Configuration • Configuration of the biphenyl molecule • Atropisomerism • Optical isomerism in nitrogen containing compound amines • Geometrical isomerism • Geometrical isomerism of nitrogen containing compound oximes • Hybridisation • Chemistry of Biomolecules: Carbohydrates • Glycosiders • Amino acids and proteins • Lipids • Vitamins • Terpenoids • Alakaloids • Purines