

CY-513 ORGANIC SYNTHESIS

Carbon-Carbon Bond Formation Reactions (CCBF): Ortho strategy for aromatic compounds.

Carbon-Carbon Double Bonds: Synthesis of double bonds of defined stereochemistry, stereo-controlled vinyl anion equivalents, electrophilic attacks on alkenes, vinylcations, palladium-catalyzed C-C coupling, allyl alcohols, allyl equivalents.

Stereochemistry: Asymmetric induction I-III: Reagent-based strategy, asymmetry catalysis, formation of C-H, C-C, C-O and C-N bonds, substrate-based strategy, stereochemical control.

Rearrangement in Synthesis: Nucleophilic, electrophilic and free-radical rearrangements, thermal rearrangement of amino ketones.

Pericyclic Reactions in Synthesis: Electrocyclic reactions, cycloaddition reactions, sigma tropic rearrangements, stereochemistry.

Synthesis of Natural Products using Retrosynthesis: Synthesis of five or more natural products from recent research journals.

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