DEPARTMENT OF CHEMISTRY & CHEMICAL BIOLOGY

Fragment Coupling and Constructing Quaternary-Carbon Stereocenters Using Carbon Radicals

PRESENTED BY:

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Convergent synthesis strategies in which an organic molecule is prepared by a branched approach wherein two or more fragments are combined at a late stage are almost always preferred over a linear approach in which the overall yield of the target molecule is eroded by the efficiency of each successive step in the sequence. As a result, reactions that achieve the high-yielding union of polyfunctional fragments have particular importance in the preparation of structurally intricate organic molecules. This lecture will discuss the under-appreciated utility of bimolecular reactions of free radicals to couple structurally intricate fragments with a particular emphasis on the total synthesis of heterocyclic diterpenoid natural products.