

Organic Seminar

Professor Albert Padwa
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Thursday, October 29, 2009
11:00 a.m.
Room 1315 Chemistry



Use of Sulfur Fragments for the Synthesis of Nitrogen Heterocycles

Sequential transformations enable the facile synthesis of complex natural products from simple building blocks in a single preparative step. Their value is amplified if they also create multiple stereogenic centers. Our research program at Emory has focused on using new cascade reactions of several 1,3- and 1,4-dipoles as well as thio-substituted amidofurans for alkaloid synthesis. Our interest in using these domino sequences originated from some earlier work centered on the Pummerer cyclization/cycloaddition cascade of γ -sulfinylenones containing tethered π -bonds. Making use of various cascade reactions of thio fragments, we have been able to rapidly assemble numerous alkaloidal systems in excellent yield.