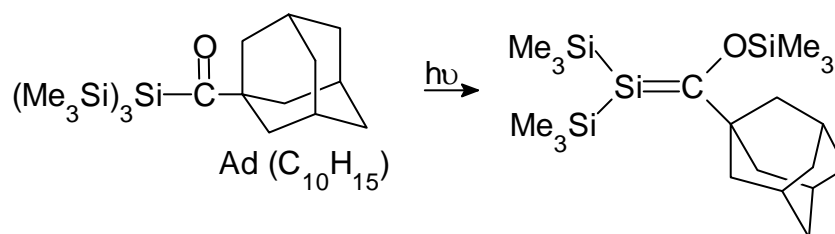


THE Si=C STORY: THE WAY IT HAPPENED

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Studies by my research group of a number of new types of functionalized organosilicon compounds, namely silylcarbinols (Si-C-OH), silanecarboxylic acids (Si-COOH), acylsilanes (Si-CO-R), and α -silylketones (Si-C-CO-R) led ultimately to the preparation of acyldisilanes (Si-Si-CO-R) and polysilylacylsilanes (Si₃Si-CO-R). Photolysis of the acyldisilanes indicated that silenes, compounds containing silicon-carbon double bonds, were, as anticipated, one of the products formed. Photolysis of the acylpolysilane where R = t-Bu gave evidence for a silene stable in solution over extended period of time and photolysis (or thermolysis) of the acylsilane where R = 1-adamantyl gave rise to the first example of an isolable stable solid compound containing a silicon-carbon double bond.



The key reactions leading through this series of compounds to silenes will be briefly described.