



National Academy of Sciences of Ukraine



INSTITUTE OF ORGANIC CHEMISTRY



UNIVERSITÉ
DE REIMS
CHAMPAGNE-ARDENNE

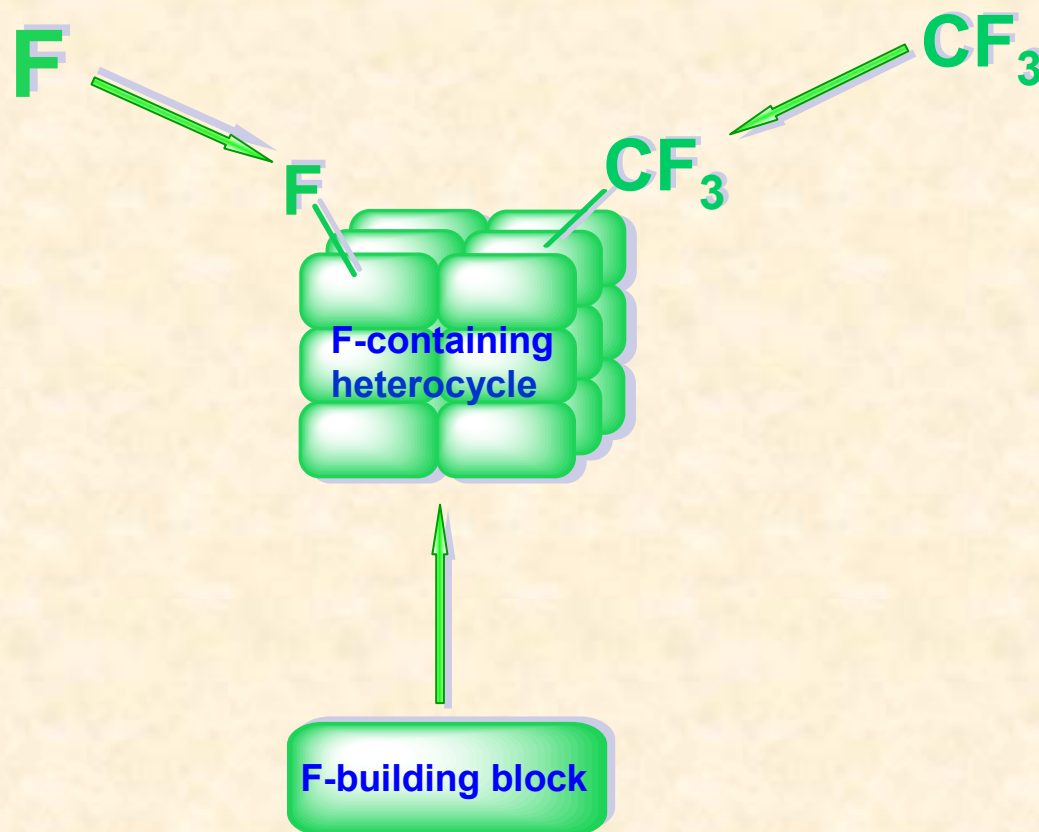


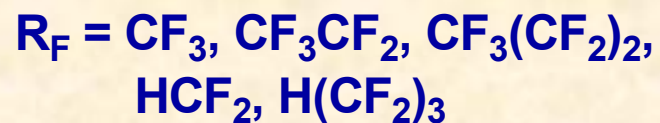
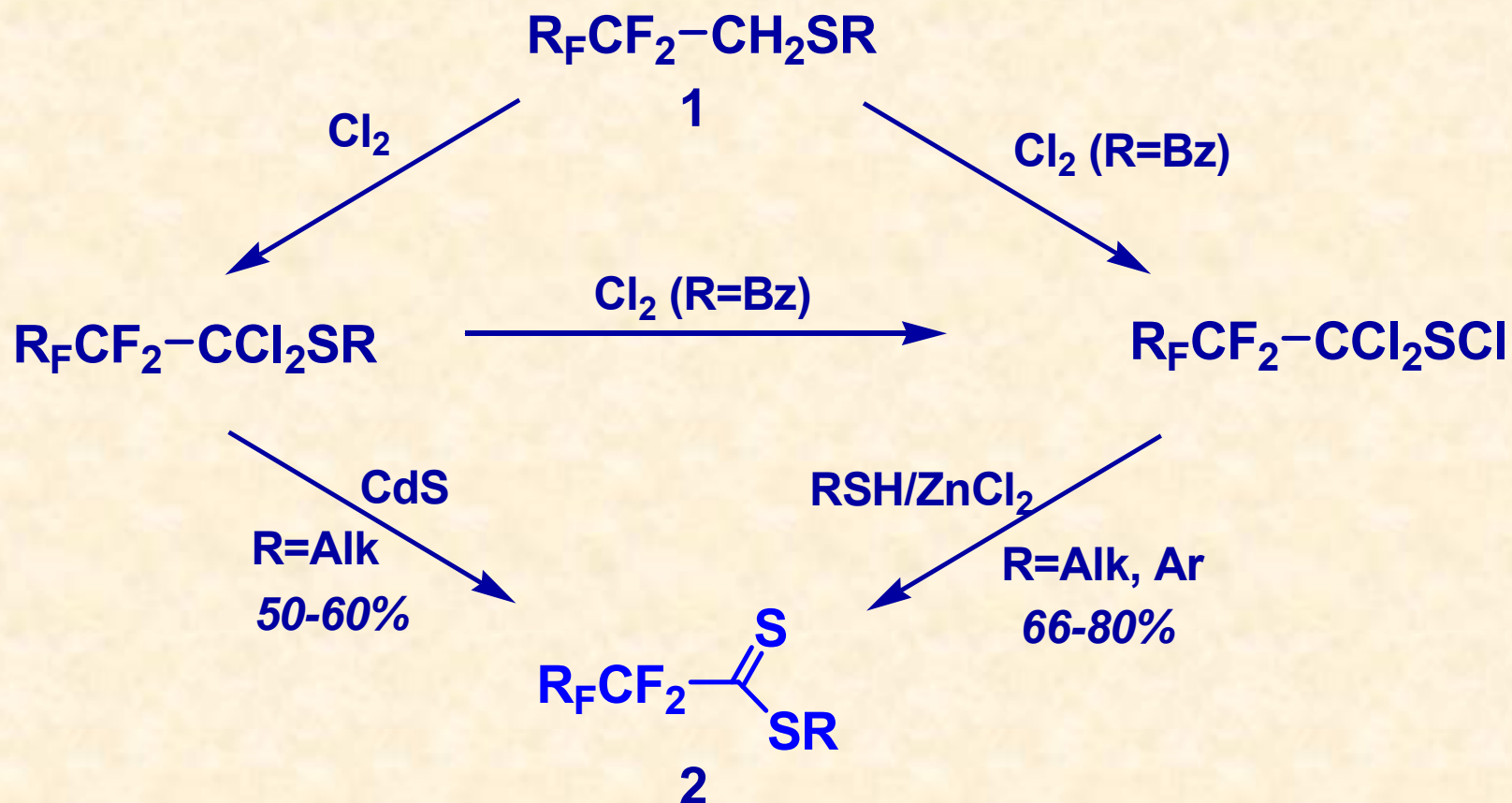
Application of thiocarboxylic acid derivatives for syntheses of fluoro-sulfur containing heterocycles

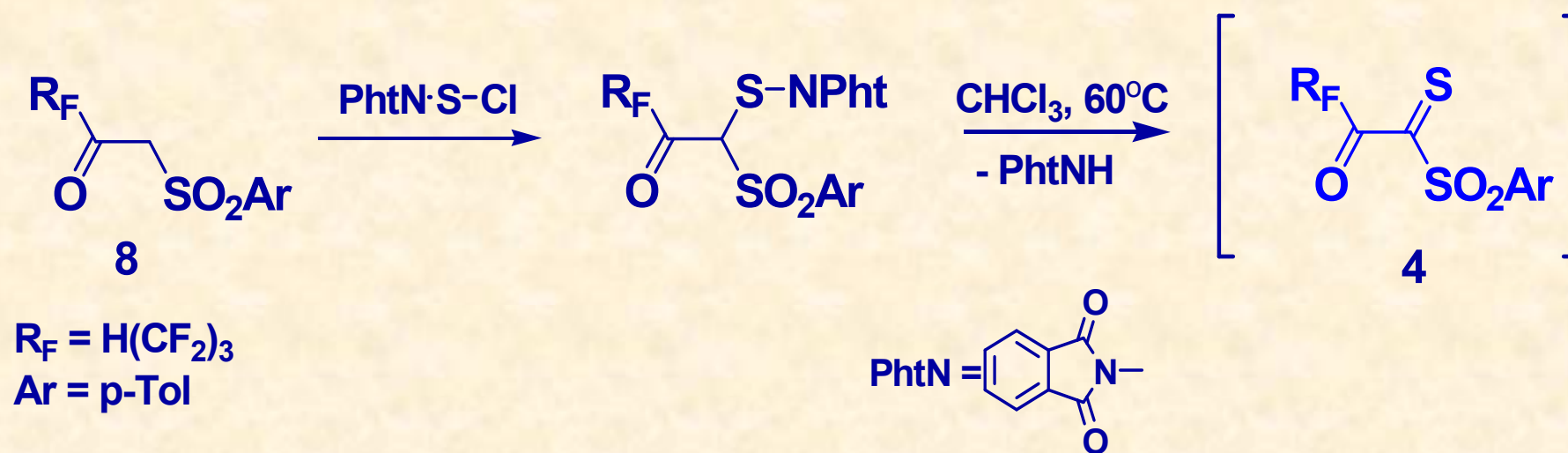
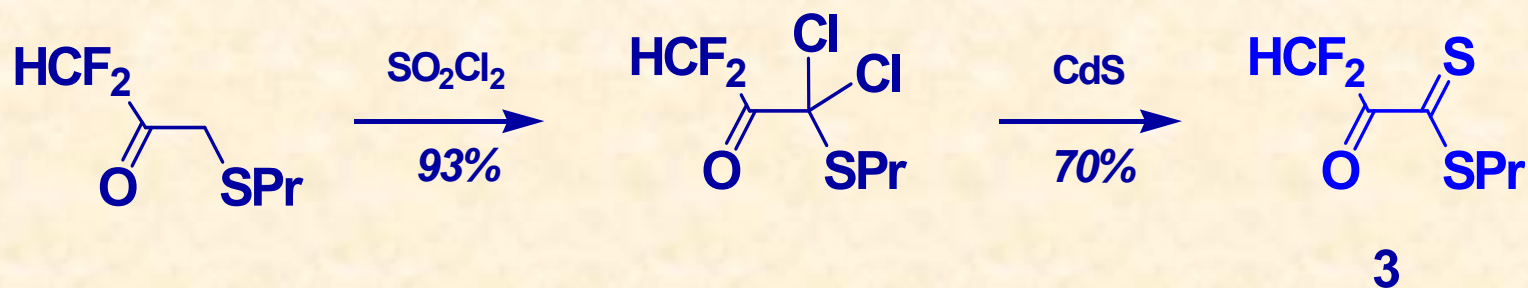
V.M.Timoshenko, J.-P.Bouillon, C.Portella, Yu.G.Shermolovich

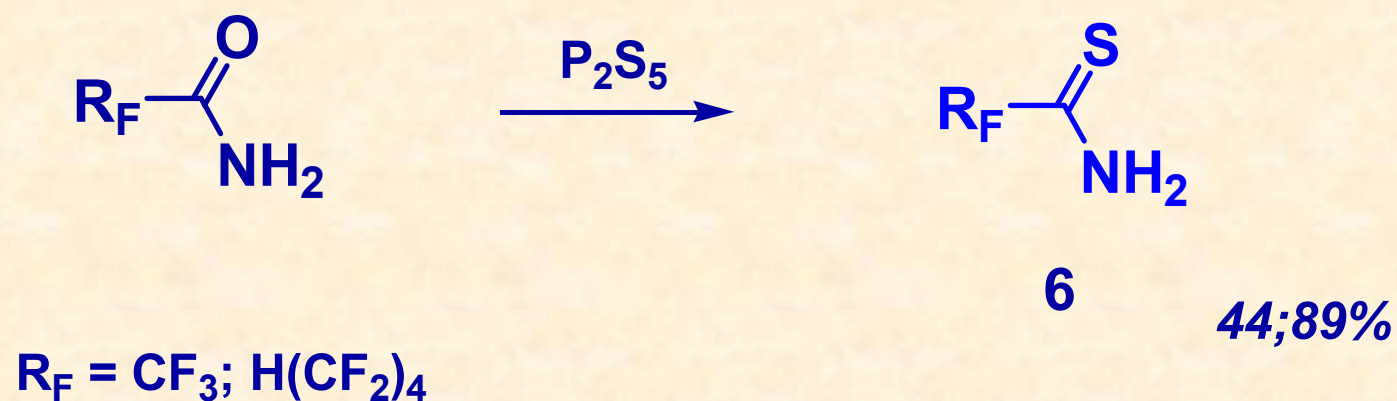
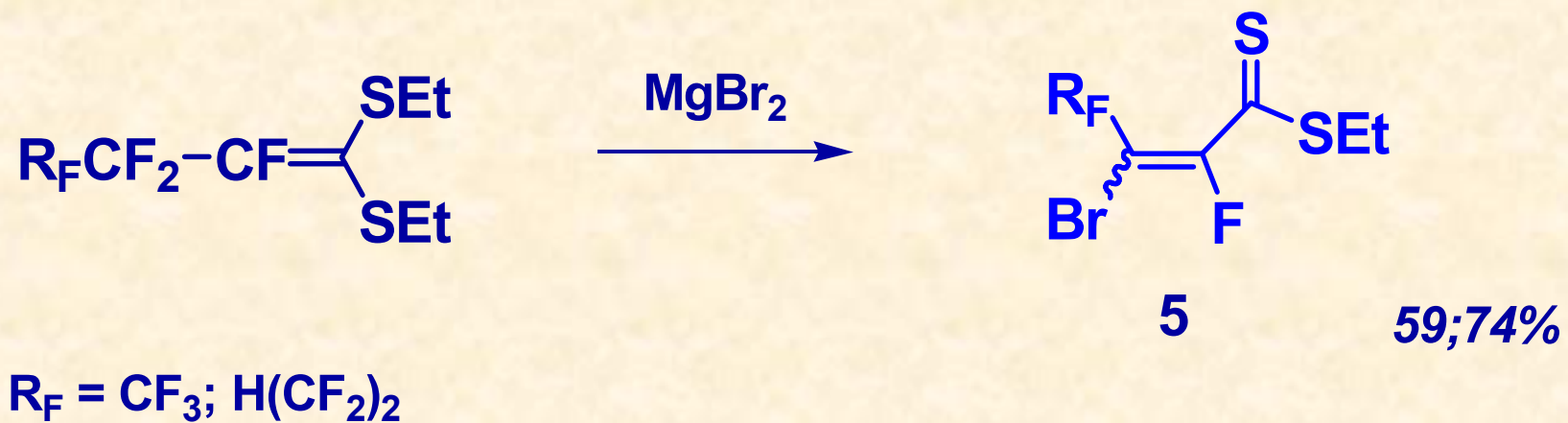
Synthetic approach to the fluorine containing heterocycles

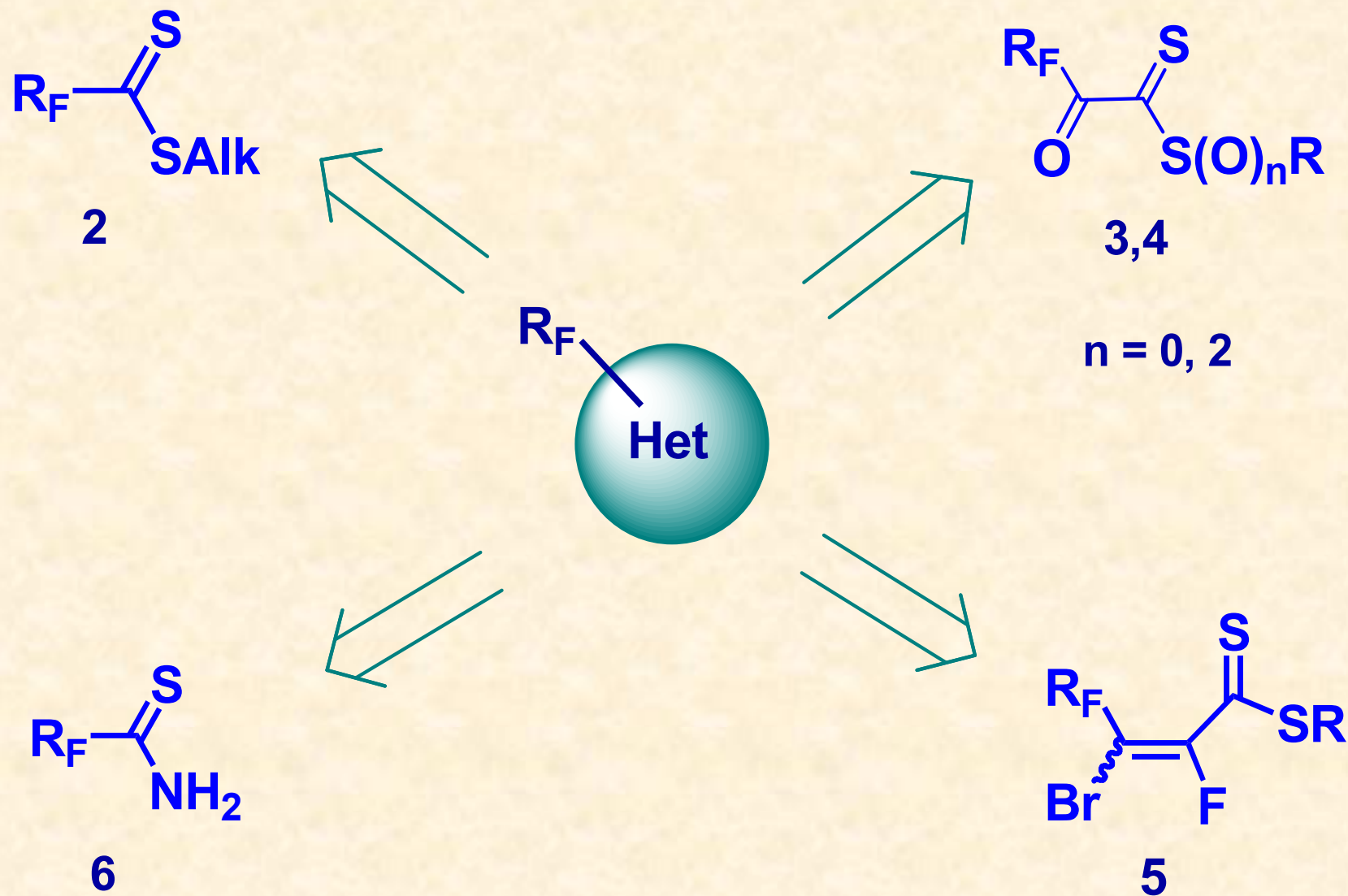
1. Introduction of fluorine or polyfluoroalkyl group into existent heterocyclic molecule
2. Synthesis of heterocycles from fluorine containing building blocks

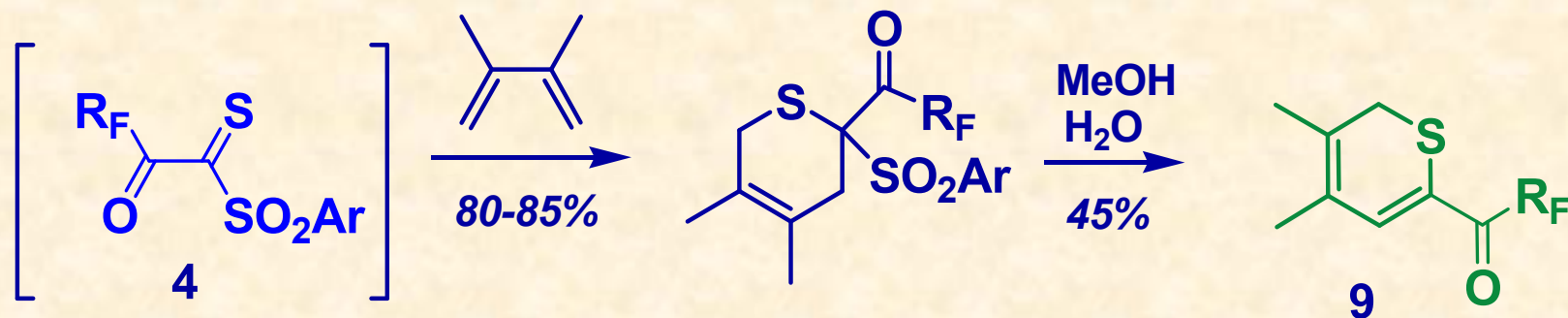
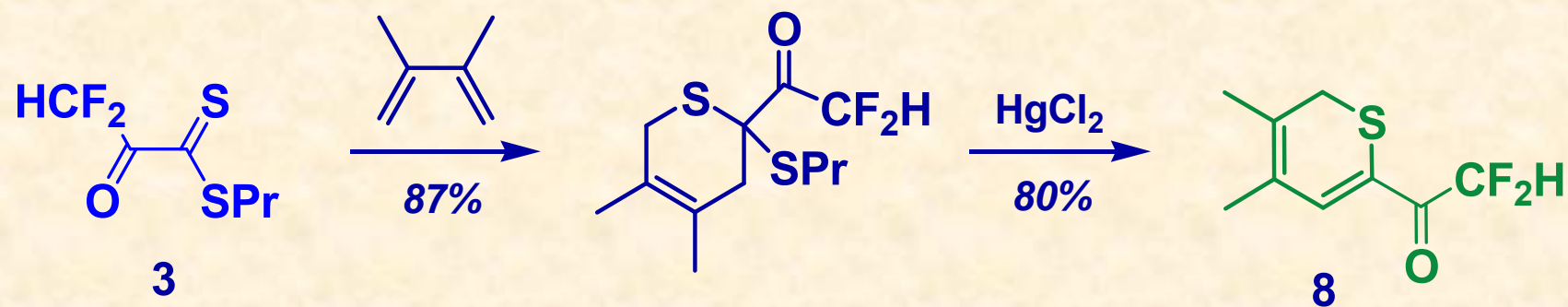
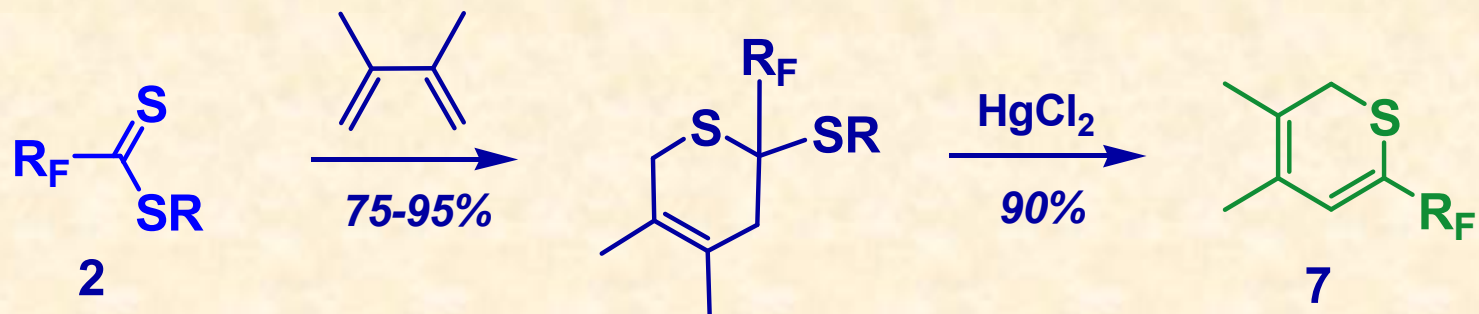


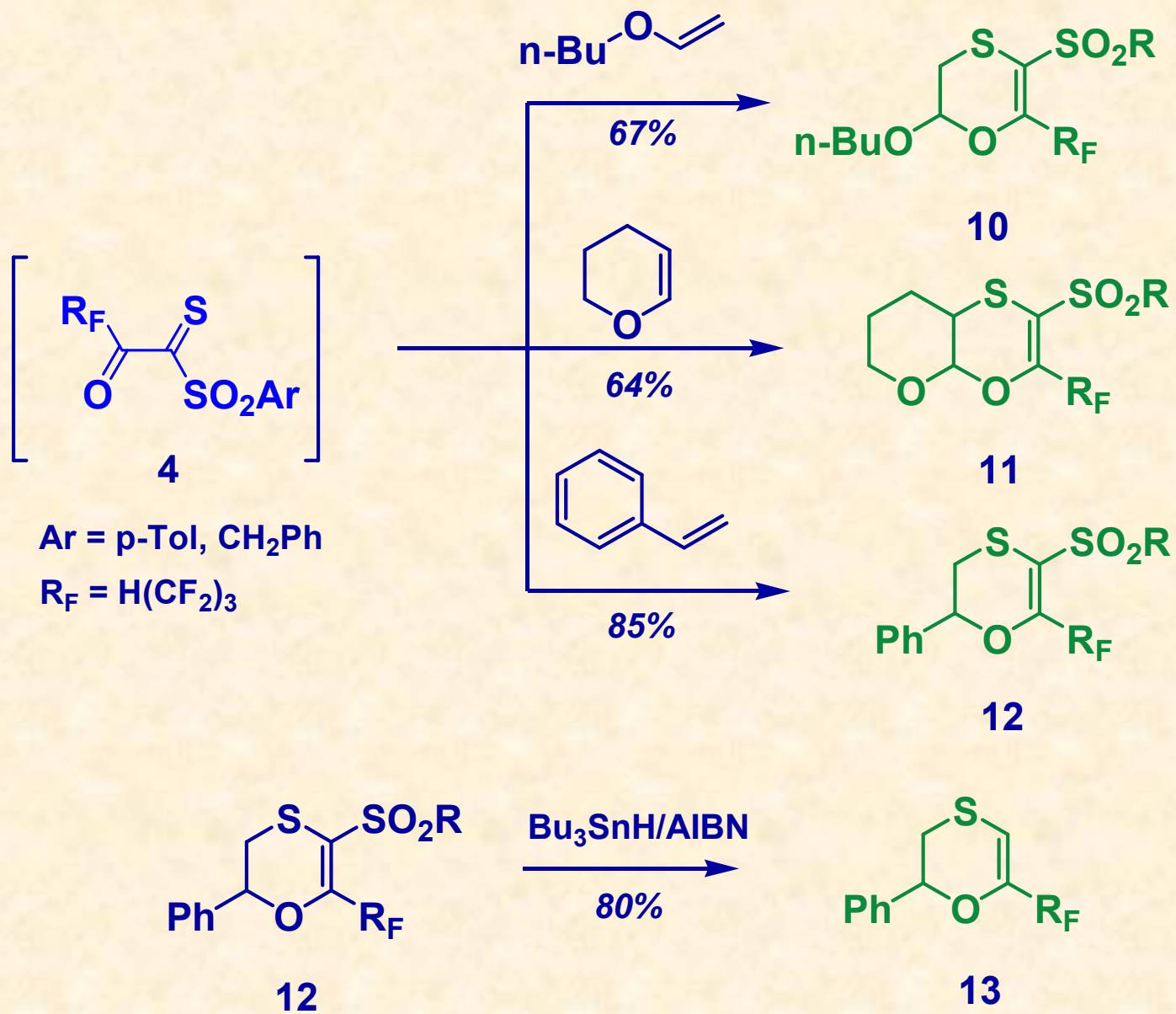


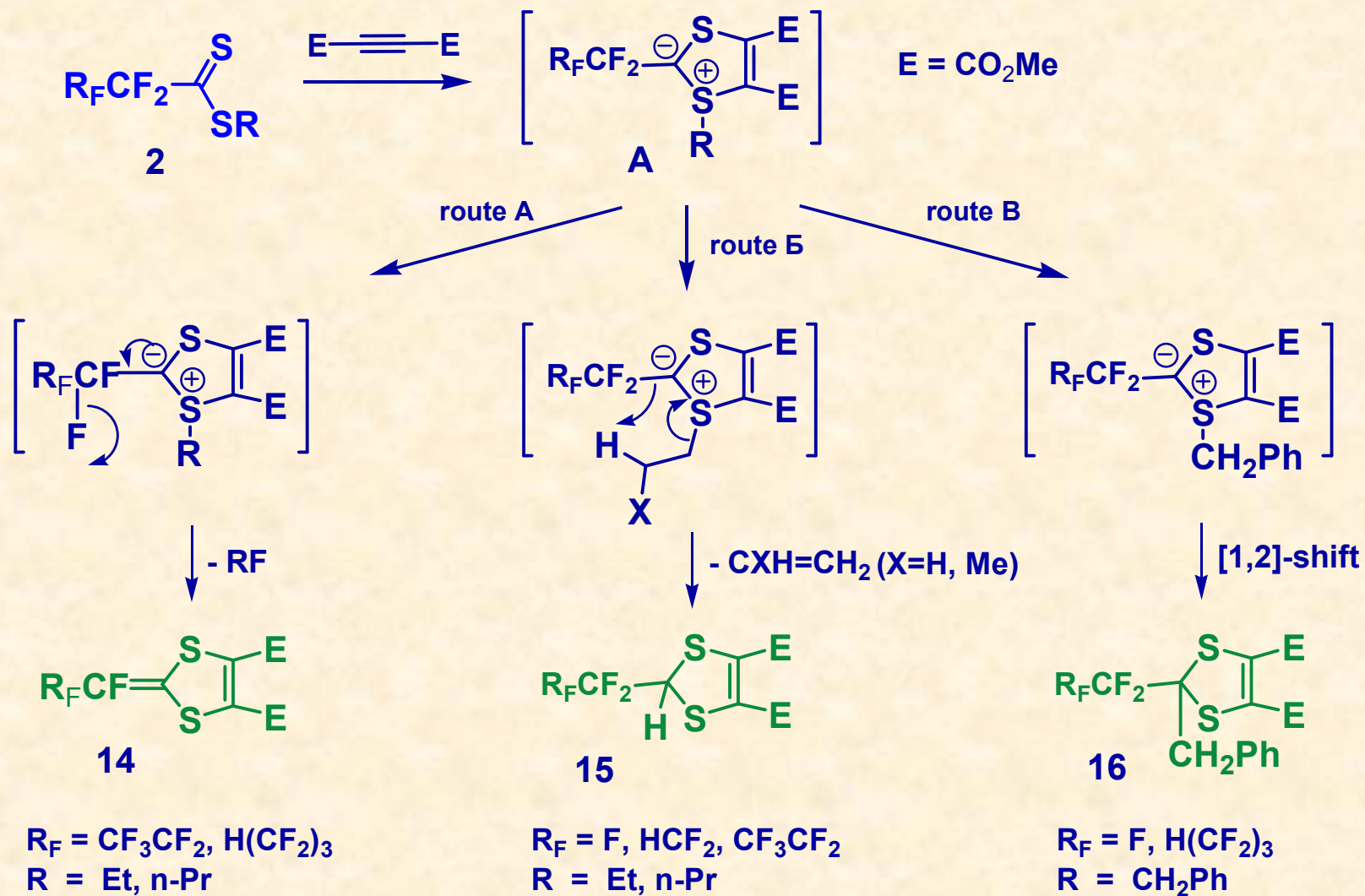


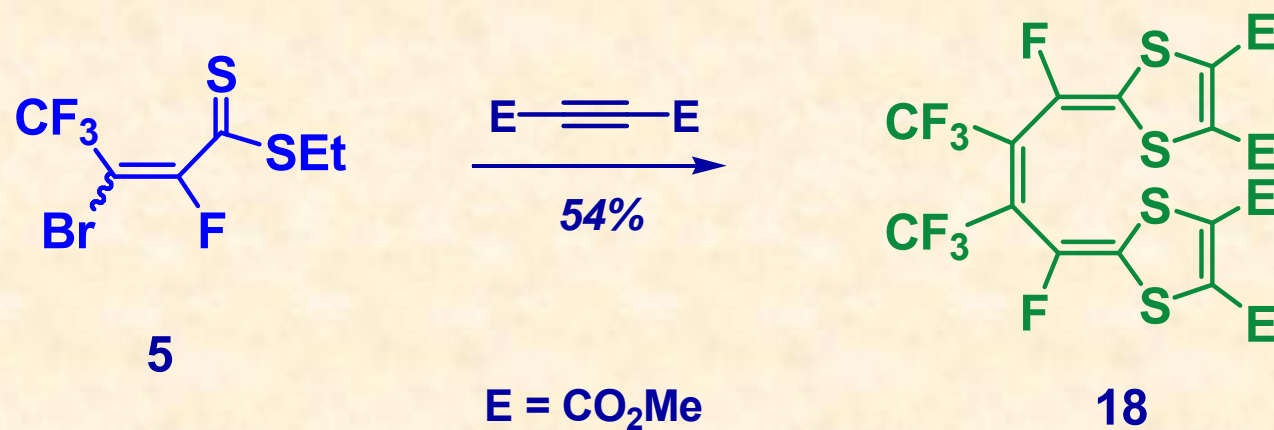
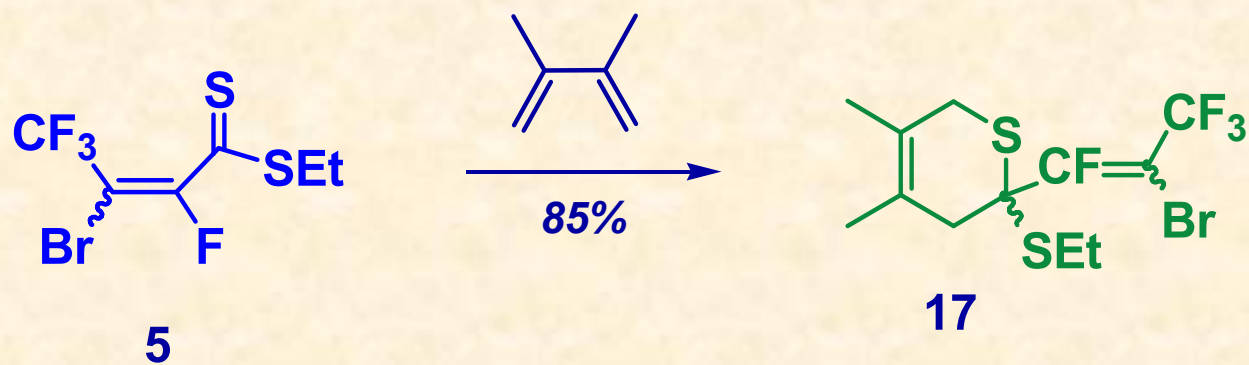


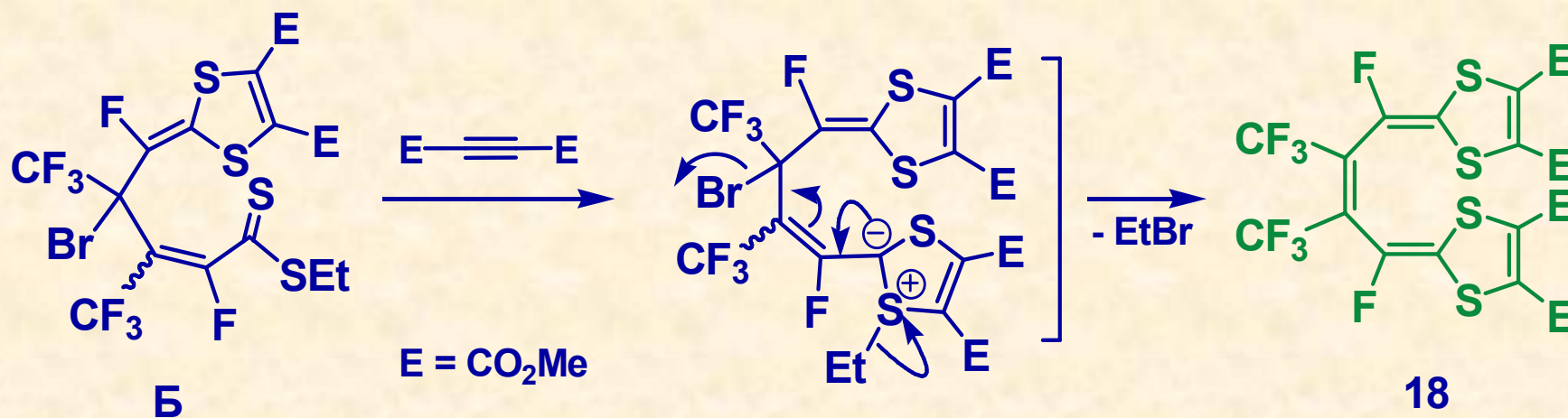
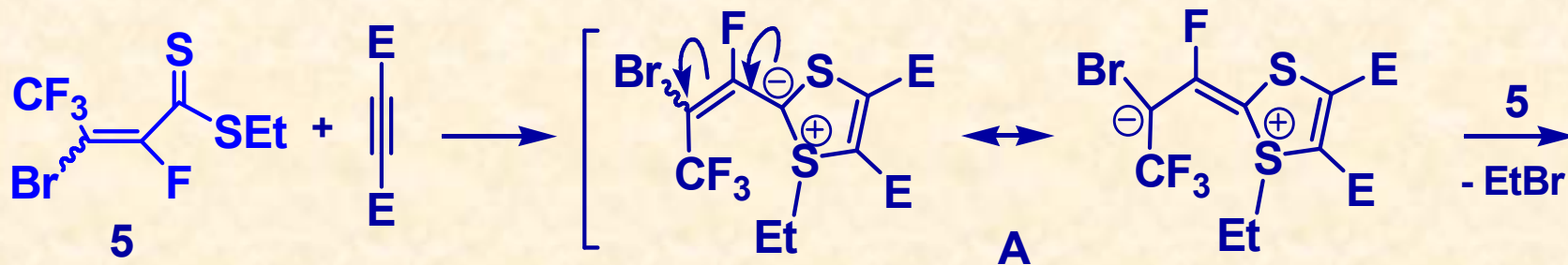


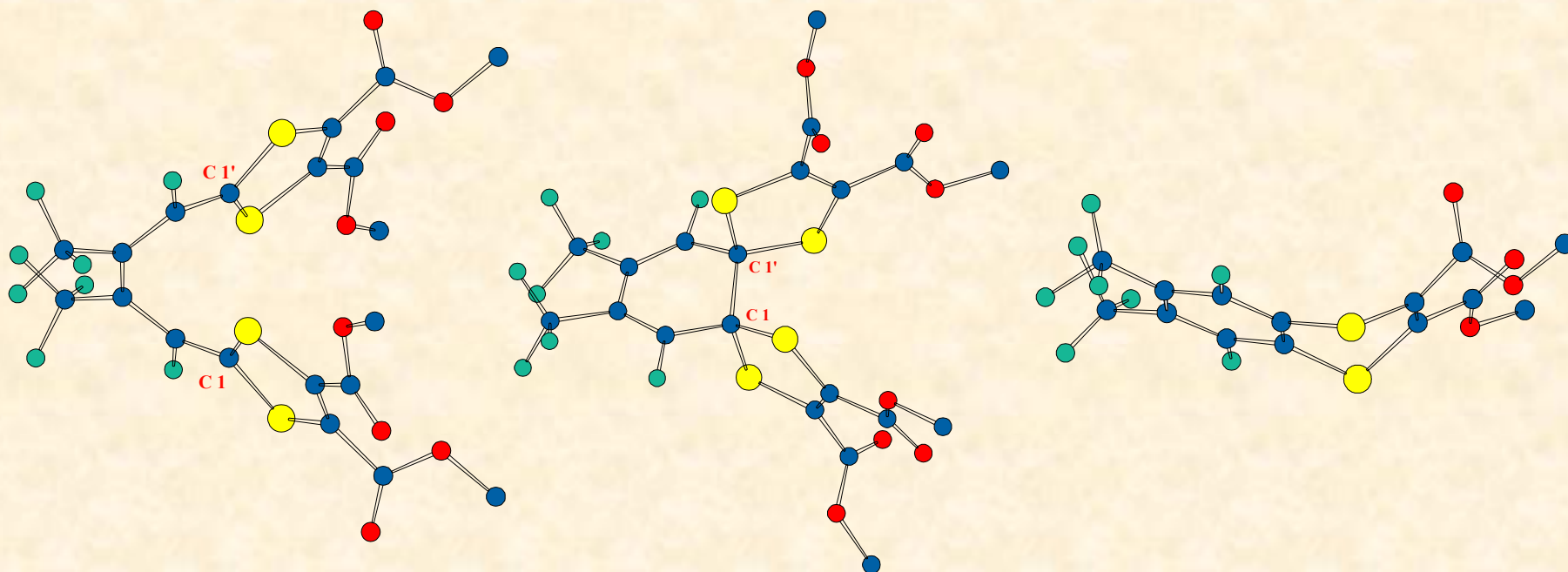
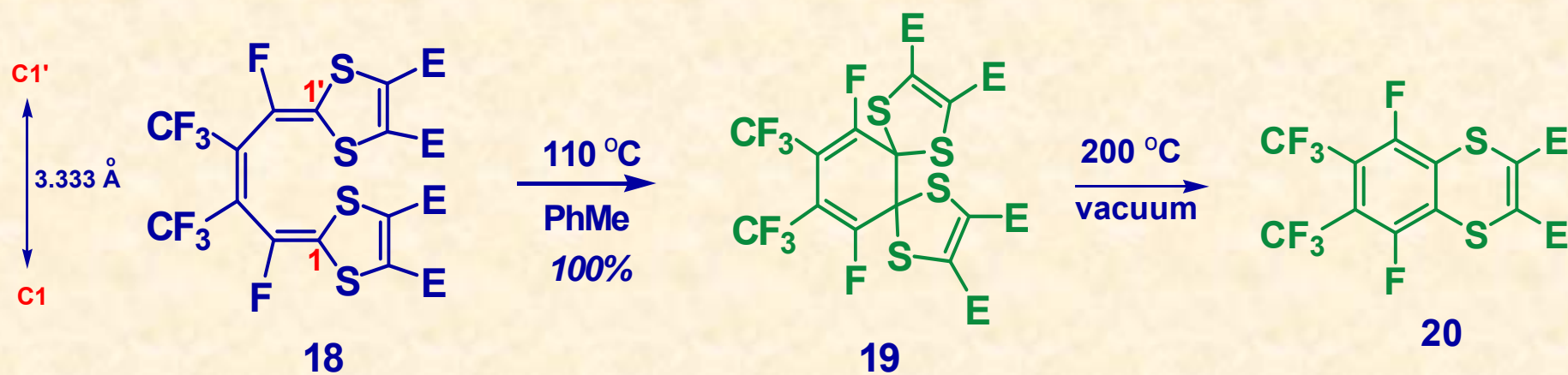


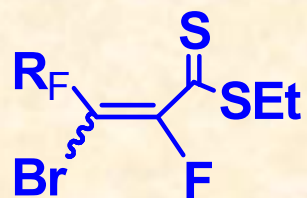




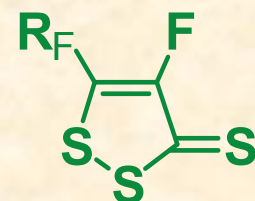
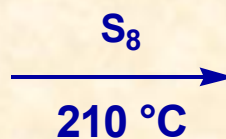
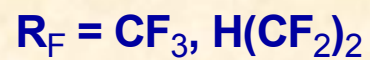






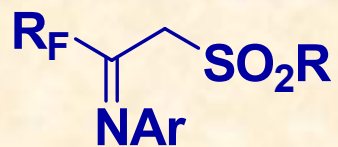


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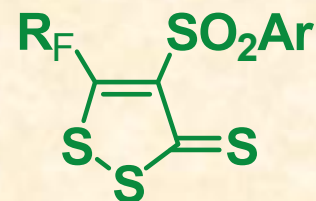
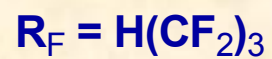


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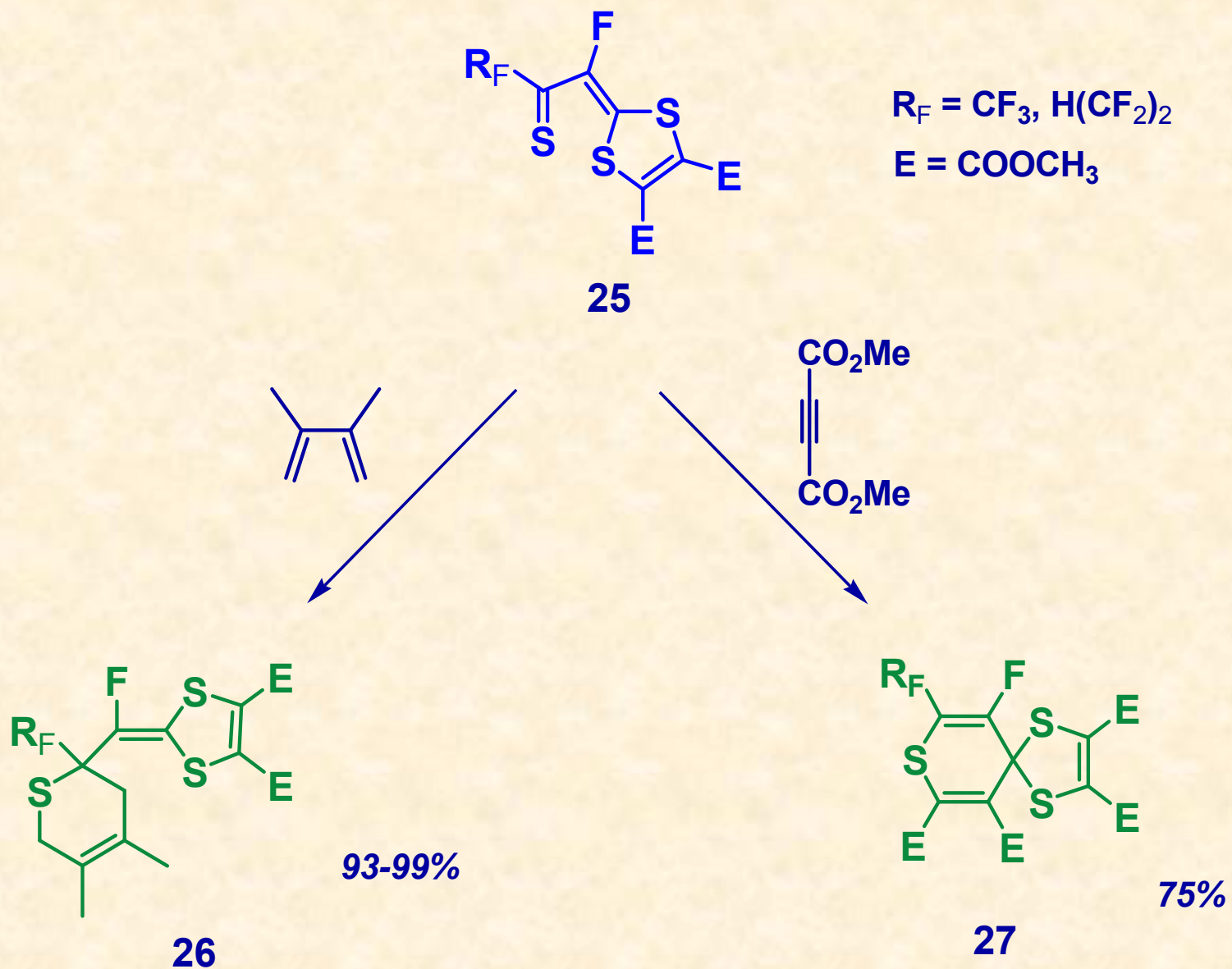
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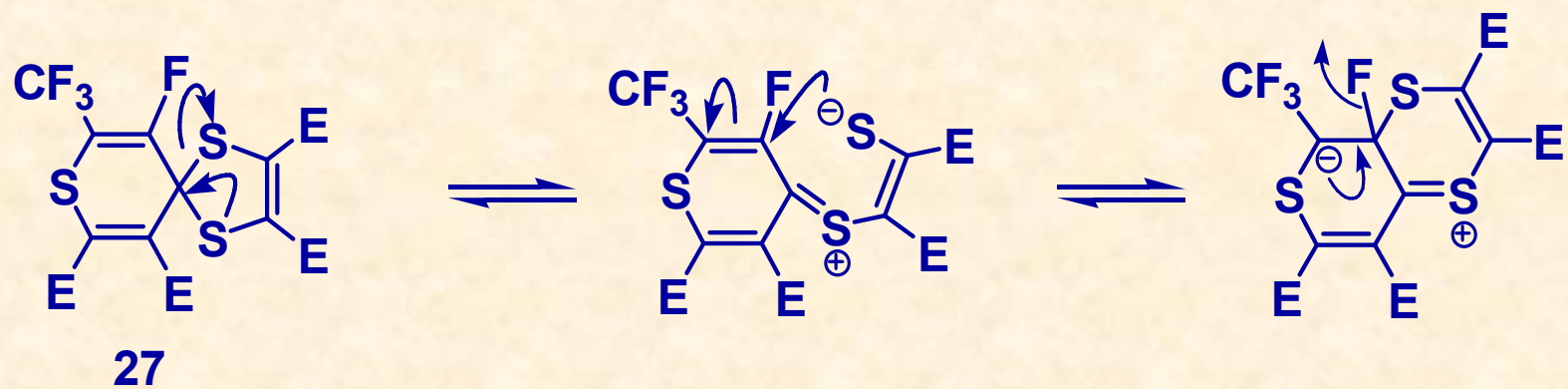


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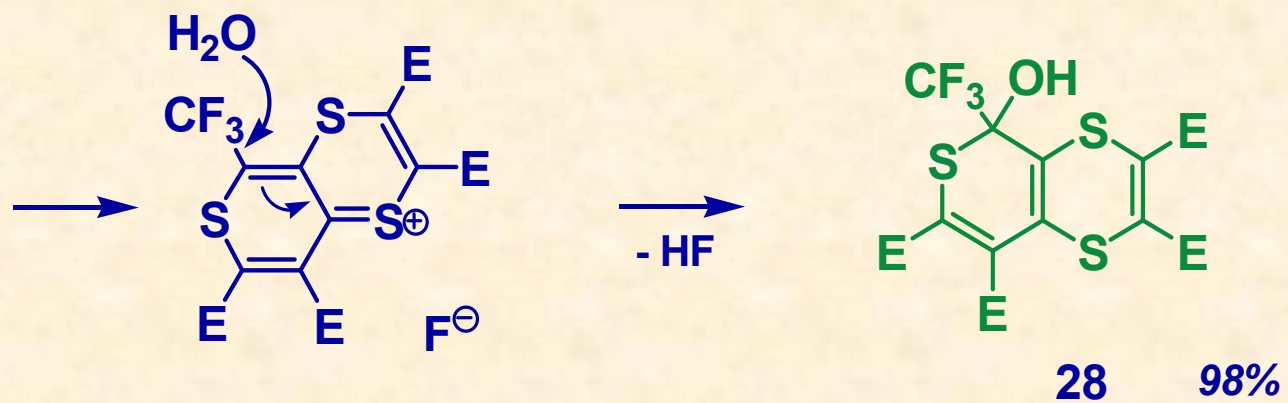
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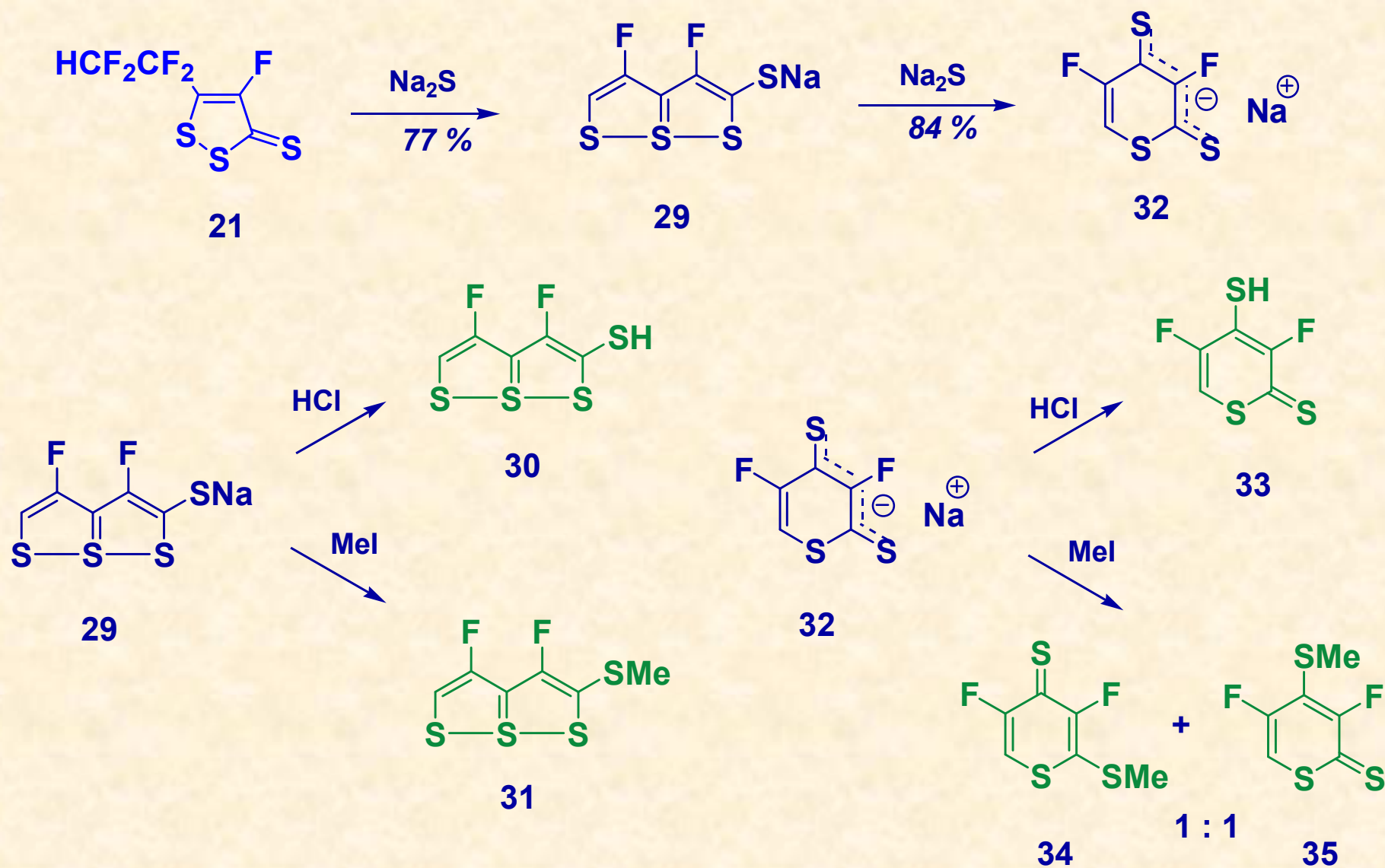


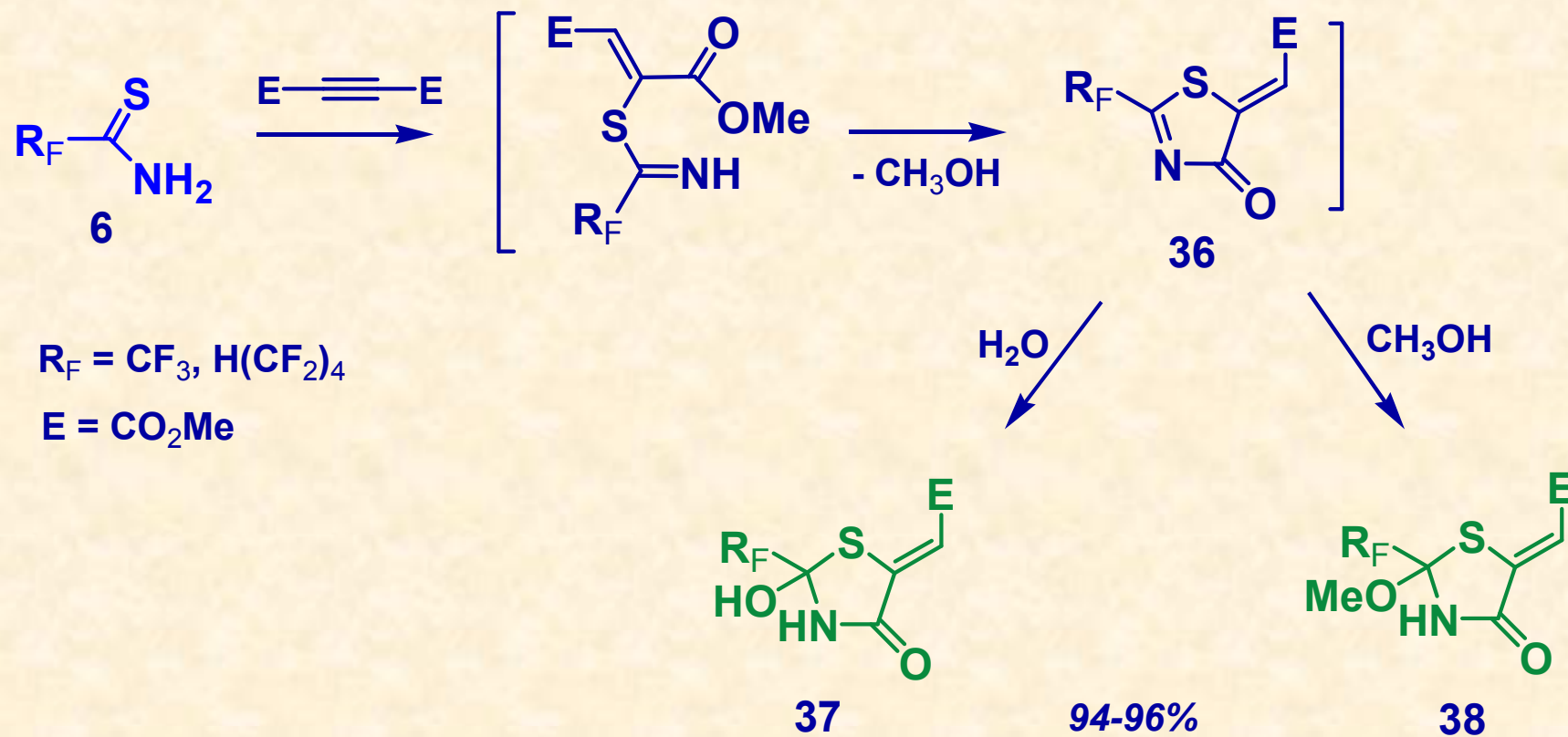


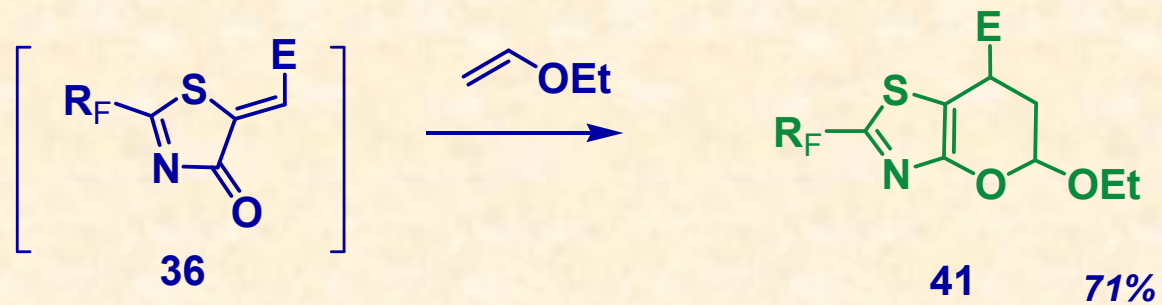
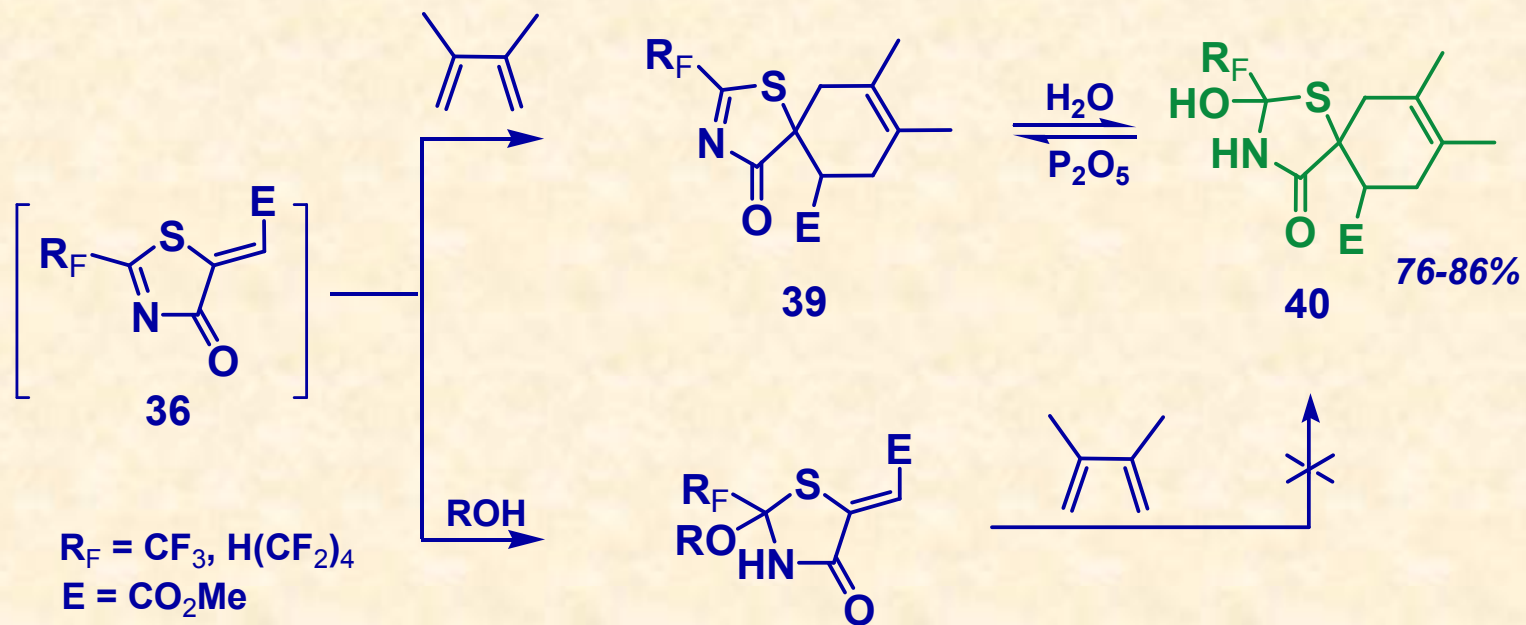


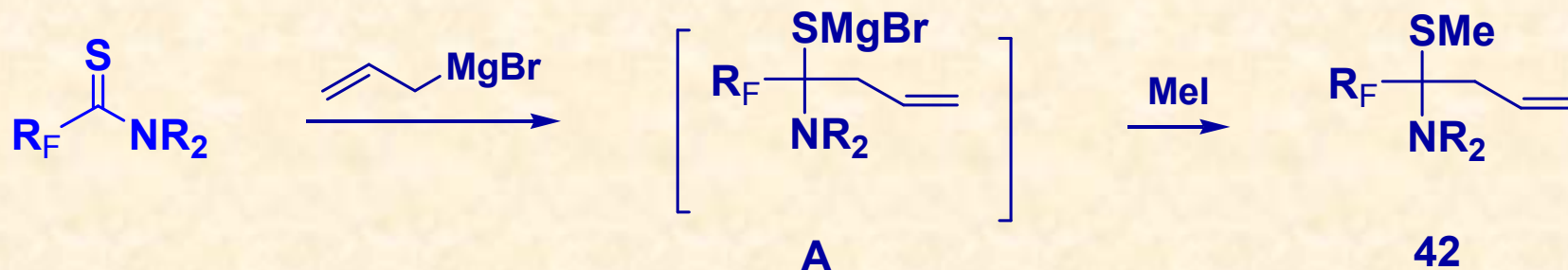
$E = \text{CO}_2\text{Me}$



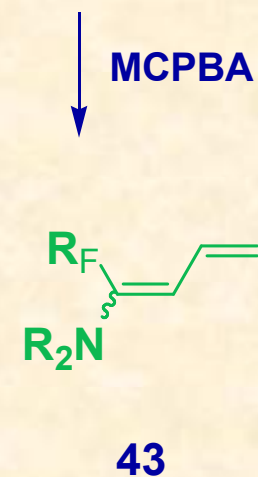
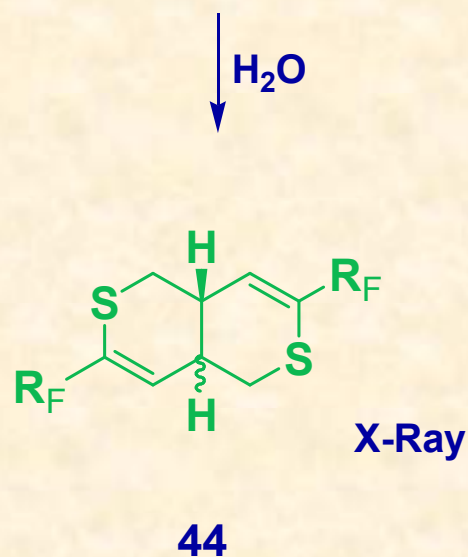


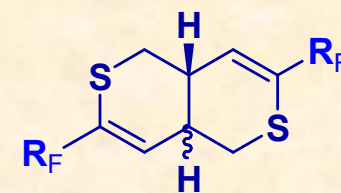
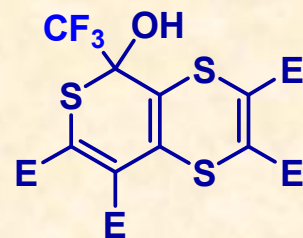
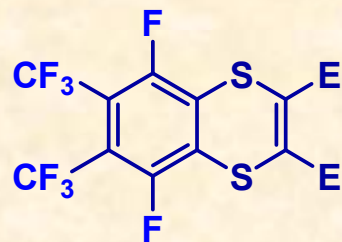
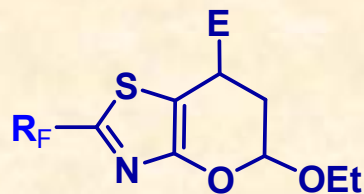
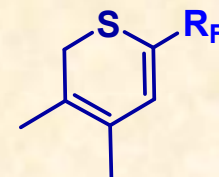
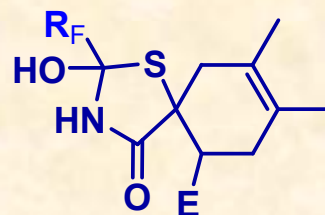
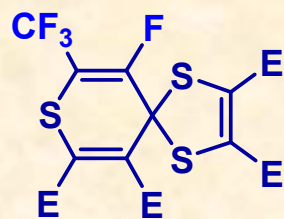
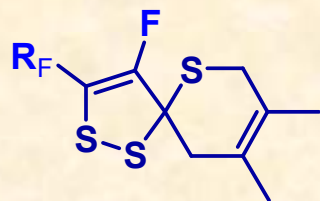
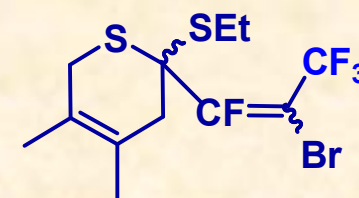
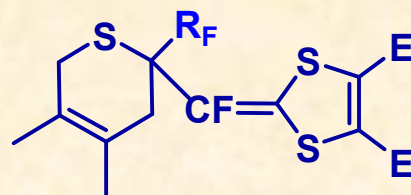
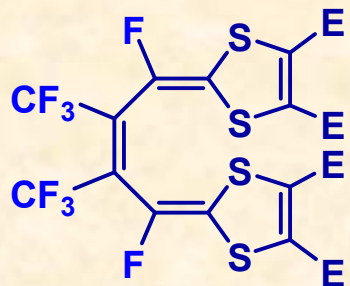
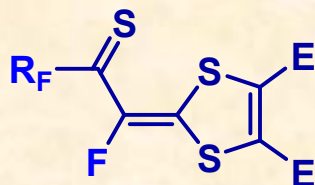
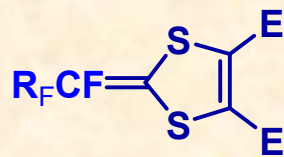
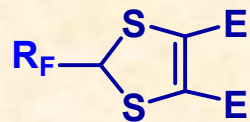
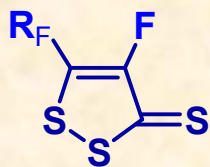






$\text{R}_\text{F} = \text{CF}_3, \text{C}_2\text{F}_5, \text{C}_3\text{F}_7;$
 $\text{NR}_2 = \text{piperidine, morpholine}$





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