

Seminar Abstract
"Go to the Ant, Thou Sluggard!"...Chemistry in Formic Acid
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The utility of the S_N1 reaction in organic synthesis is often compromised by the intermediacy of the carbocation intermediates, and by the relatively harsh reaction conditions often required to form the carbocation. We have found that certain alcohols capable of forming especially stable carbocations will react with formic acid under reflux in the absence of a strong acid catalyst to give a formate ester which then undergoes solvolysis at a synthetically useful rate. This facile formation of carbocations has allowed us to develop methods for benzhydrylation of enols, the synthesis of N-benzhydrylamides, and for the synthesis of 3,4-disubstituted-3,4-dihydro-2(1H)-quinolones. The scope and limitations of these reactions will be discussed, along with examples of other chemistry in our research group.