

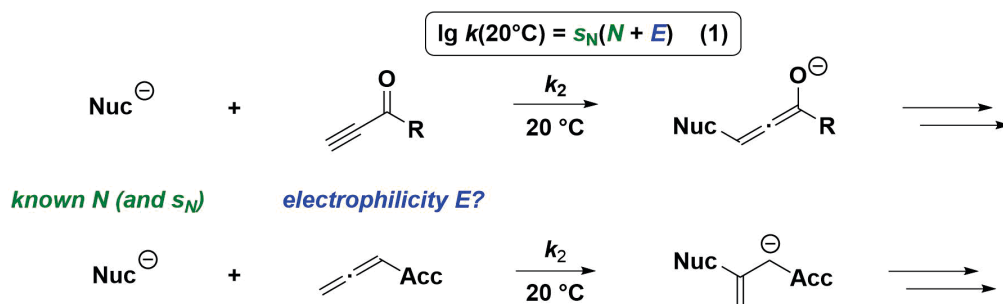
## REACTIVITIES OF ELECTROPHILIC ALKYNES AND ALLENES

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Michael additions belong to the most important C–C-bond-forming reactions in organic chemistry. The electrophilicities of prototypical Michael acceptors, such as alkyl acrylates, acrylonitrile or vinyl ketones, have recently been studied in DMSO by following the kinetics of their reactions with carbon-centered nucleophiles. Analyzing the second-order rate constants for these Michael additions by the correlation equation (1) provided an electrophilicity ranking for classical Michael acceptors.<sup>[1]</sup>

We have now set out to study the kinetics of the reactions of alkynones, alkyl propiolates, and alkyl allenoates with nucleophiles of known nucleophilicity  $N$  (and  $s_N$ ) to characterize the synthetic potential of Michael acceptors with  $sp$ -centered reactive sites. Integration of electron-deficient alkynes and allenes into the Mayr reactivity scales<sup>[2,3]</sup> allows to compare their electrophilicities  $E$  with those of more than 300 structurally diverse electrophiles and provides a semi-quantitative fundament for understanding their prominent role as substrates in nucleophile-catalyzed cycloaddition reactions.<sup>[4]</sup>



## REFERENCES

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