

Nitrene Cycloadditions. Regiochemistry

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ABSTRACT

Cycloaddn. reactions of $\text{PhCH:N}^+(\text{O}^-)\text{Ph}$ (I) and 3,4,5,6-tetrahydropyridine 1-oxide with monosubstituted ethenes gave 5-substituted isoxazolidines as the major products, but increasing amts. of the 4-substituted regioisomers were formed with increasing ionization potential of the dipolarophile. E.g., reaction of I with styrene and $\text{CH}_2:\text{CHCO}_2\text{Et}$, resp., gave 98.4:1.6 and 70:30 mixts., resp., of the corresponding isoxazolidines II and III ($\text{R} = \text{Ph}, \text{CO}_2\text{Et}$).

