

Furan-Containing *gem*-Bromonitroethenes: Synthesis and Reaction with Morpholine

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Abstract—The first time the representative of furan-containing *gem*-bromonitroethenes 5-nitro-2-(2-bromo-2-nitro-ethenyl)furan was synthesized by bromination of 5-nitro-2-(2-nitroethenyl)furan followed by dehydrohalogenation of the dibromide. Morpholine adducts of the synthesized β -substituted *gem*-bromonitroethene and its analog with a 5-bromo-2-furyl substituent were obtained. The structures of the *gem*-bromonitroethenes and aza adducts were characterized by spectral methods (IR, UV, ^1H , and ^{13}C – $\{^1\text{H}\}$ NMR, including ^1H – ^{13}C HMQC and HMBC).

Keywords: furan, *gem*-bromonitroethene, morpholine, nucleophilic addition

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