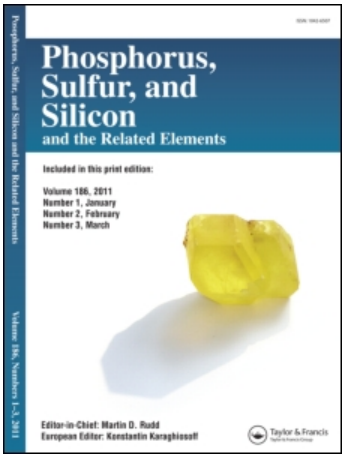

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Dithienylthiazines from Dithienylacetylenes

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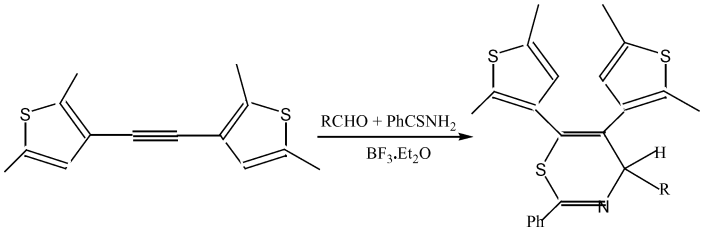
Keywords Dithienylacetylenes; dithienylthiazines

Recently we studied the Friedel–Crafts acylation of 2-methyl-, 2,4-, and 2,5-dimethylthiophenes with oxalyl chloride in the presence of $AlCl_3$. The conditions were found to suppress the formation of some side products and to obtain target α-diketones in 50–60% yields. This was attained by adding pyridine or lowering the polarity of the medium because of the use of 1,2-dichloroethane-heptane mixtures as solvents. Dithienylethanediones were transformed to dihydrazones and the latter were readily oxidized by air in the presence of CuCl in pyridine solution to give corresponding dithienylacetylenes.[1] Now the cycloaddition of bis(2,5-dimethyl-3-thienyl)acetylene with thiobenzamide and hetarenecarbaldehydes catalyzed by BF_3 etherate has been shown to afford 4-substituted 5,6-bis(2,5-dimethyl-3-thienyl)-4*H*-1,3-thiazines (R = 2-thienyl, 3-thienyl, 5-methyl-2-thienyl, 2,5-dimethyl-3-thienyl, 5-methyl-2-furyl), which possess moderate photochromic properties.



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REFERENCE

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