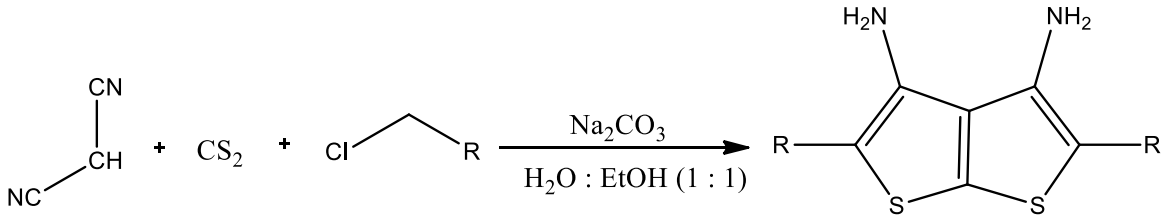
Abstract

A new, facile, simple, low-cost, one-pot and environmentally friendly method has been described for the synthesis of thieno[2,3-*b*]thiophene-3,4-diamines from the reaction of malononitrile, carbon disulfide, sodium carbonate and the chloroacetic acid derivatives (chloroacetonitrile, chloroacetone and ethyl chloroacetate) in the H_2O-EtOH environmentally friendly solvent system. This method does not required to purification techniques such as recrystallization, extraction, chromatography, etc. The chemical structures of all compounds were characterized by ^{1}H NMR, ^{13}C NMR and FT-IR spectrometry.



R = CO_2Et, COMe, CN

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A new method for the synthesis of thieno[2,3-*b*]thiophene derivatives

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