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Novel Quinoline-Imidazolium Adducts via the Reaction of 2-Oxoquinoline-3-Carbaldehyde and Quinoline-3-Carbaldehydes with 1-Butyl-3-Methylimidazolium Chloride [BMIM][Cl]

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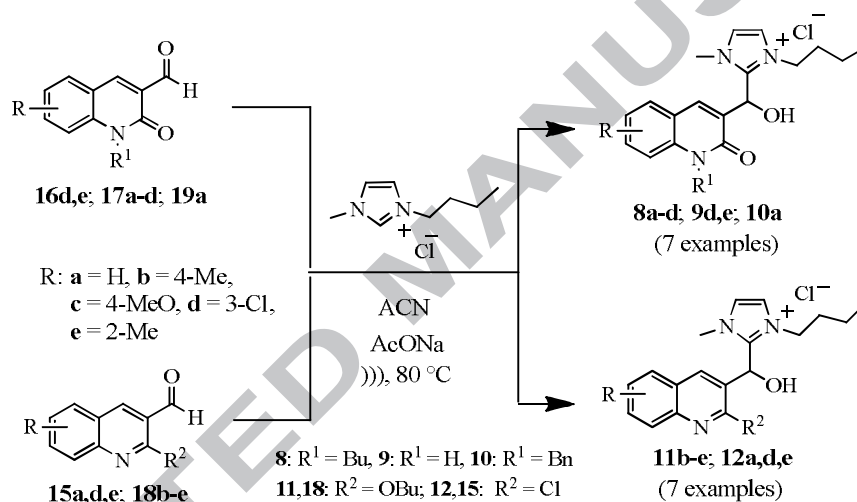
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Novel Quinoline-Imidazolium Adducts via the Reaction of 2-Oxoquinoline-3-Carbaldehyde and Quinoline-3-Carbaldehydes with 1-Butyl-3-Methylimidazolium Chloride [BMIM][Cl]

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Abstract: A library of hydroxyquinolin-3-ylmethylimidazolium adducts were prepared in high yields from the reaction of [BMIM][Cl] with various substituted quinoline-3-carbaldehydes and 2-oxoquinoline-3-carbaldehydes under mild conditions by using sodium acetate in MeCN under ultrasound irradiation. The use of sodium acetate and imidazolium chloride was crucial for the success of these C-C bond forming reactions. Attempted coupling with thiazolium bromide led instead to quinoline-3-carboxylic acid.

Keywords: quinoline-3-carbaldehyde; ionic liquids (IL's); 3-butyl-1-methylimidazolium acetate; N-heterocyclic carbenes (NHCs), hydroxyquinolin-3-ylmethylimidazolium adducts; thiazolium salts; quinoline-3-carboxylic acids.

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