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Green Synthesis of α -acetoxyphosphonate Derivatives by using ChCl/ 2Zncl2 Assolvent from 2-chloro Quinolines 3-carbaldehyde and Triethylphosphite

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Abstract: *A series of bioactive α-hydroxyphosphonate (2a-i) and α-acetoxyphosphonate (3a-i) derivatives have been synthesized for the first time by applying green approach benign choline chloride based $ZnCl_2$ a deep eutectic mixture was employed as an efficient and green ionic liquid catalyst for solvent free condition at room temperature. The current approach to generate sustainable solvent / catalyst in place of volatile organic compounds to 2-chloroquinoline-3-carbaldehyde (1a–i) with triethylphosphite. The reaction is furnished in short time and products were obtained in good yield. Elemental analysis, IR, ^{1}H NMR, ^{13}C NMR and mass spectral data elucidated the structures of all newly synthesized compounds.*

Keywords: α-hydroxyphosphonates, α-acetoxyphosphonate, deepeutectic mixture, volatile organic compounds.

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