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Received January 14, 2014
Accepted for Publication March 7, 2014
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Facile Synthesis of Bisphosphonates

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Sodium hydride in polyethylene glycol has been used as a sustainable, non-volatile, and ecofriendly catalytic medium for the green synthesis of bisphosphonates with an alkyl/aryl/heterocyclic group fixed at the geminal carbon. All compounds (3a-j) were characterized by IR, ^1H and ^{31}P NMR, mass and elemental analysis. The easy recyclability of the reaction medium makes the reaction economically and potentially viable for commercial applications.

Key Words : Bisphosphonates, Green Synthesis, NaH in PEG.