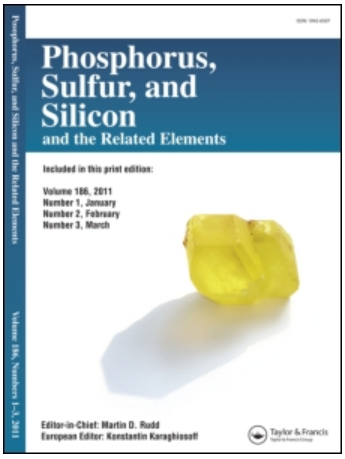

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Synthesis of (2-Furyl)Aminomethanephosphonic Acids Derivatives

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SYNTHESIS OF (2-FURYL)AMINOMETHANEPHOSPHONIC ACIDS DERIVATIVES

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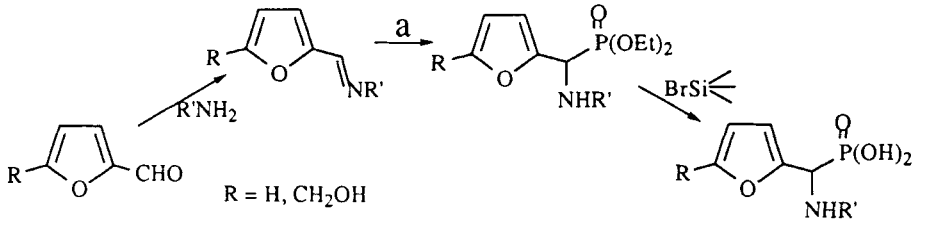
Abstract: Synthetical aspects of furylaminophosphonic acids are discussed here.

Studies on aminophosphonic acids started in late 40's[1], since then various derivatives containing alkyl, aryl or heterocyclic groups[2,3] were synthesized.

To our knowledge, furylaminophosphonic acids derivatives were scarcely studied.Here we want to report some preliminary results of their synthesis. The reaction sequence, when based on a published procedures[3], gave poor results (conv. rate = 75% after 72 hrs). But operating on such factors as temperature, a catalyst and an amount of a reagent, we improved conversion rates and consequently yields.



R' = $C(CH_3)_3$; CH_2Ph; CH_2Fur; (+) and (-) $CH(CH_3)Ph$

a: 80°, MeCN, $HP(O)(OEt)_{2(xs)}$,CF_3COOH, 6 hrs, conv. rate - 98%, Y ≈ 65 - 90%

We also performed stereochemical studies. Chiral (+) and (-) -α-methylbenzylimines when applied, yielded two diastereoisomers in 1 : 4 ratio.These results show a certain stereoselectivity of the addition of a phosphonate.But this topic is still under study.

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