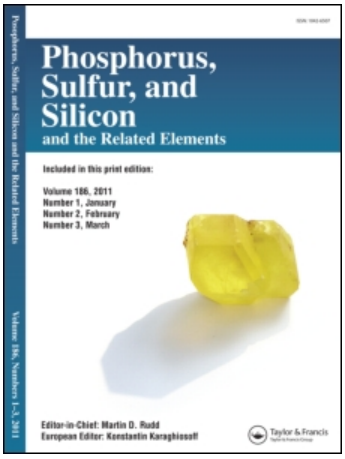

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Synthesis of 2-Substituted Pyrano[2,3-d]Pyrimidin-4(3H)-One Derivatives Using Iminophosphorane

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A new and facile route to synthesize 2-substituted pyrano[2,3-d]pyrimidin-4(3H)-ones derivatives using iminophosphorane from easily obtained starting materials was investigated and expanded.

Keywords Iminophosphorane; pyrano[2,3-d]pyrimidine; synthesis

The derivatives of pyranopyrimidines have been the focus of great interest over many years due to the remarkable biological properties of pyranopyrimidine system.[1,2] Here we reported the synthesis of 2-substituted-5-aryl-3,8-diphenyl-6-methyl-5,8-dihydro-pyrazolo [4′,3′:5,6] pyrano[2,3-d]pyrimidin-4(3H)-ones **6.** The pyrazolo[3,4-b]pyran **3**, which was easily obtained from pyrazolone **1** and ethyl α-cyanocinnamates **2** using TEBA as catalyst and water as solvent, was converted to iminophosphorane **4** *via* reaction with triphenylphosphine, hexachloroethane and Et_3N[3].

Iminophosphorane **4** was reacted with phenyl isocyanate to give carbodiimides **5**, which were allowed to react with nucleophiles such as amines, alcohols and phenols to produce target compounds. Structure of compounds **6** were identified by ^{1}H NMR, IR spectra data, elemental analysis, and one by single crystal X-ray analysis.

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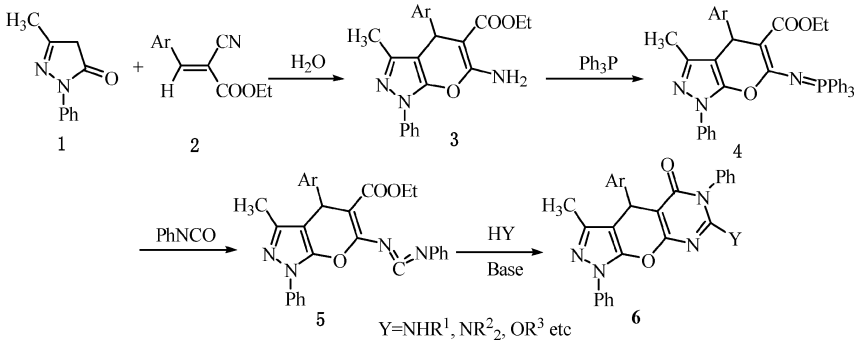

SCHEME 1

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