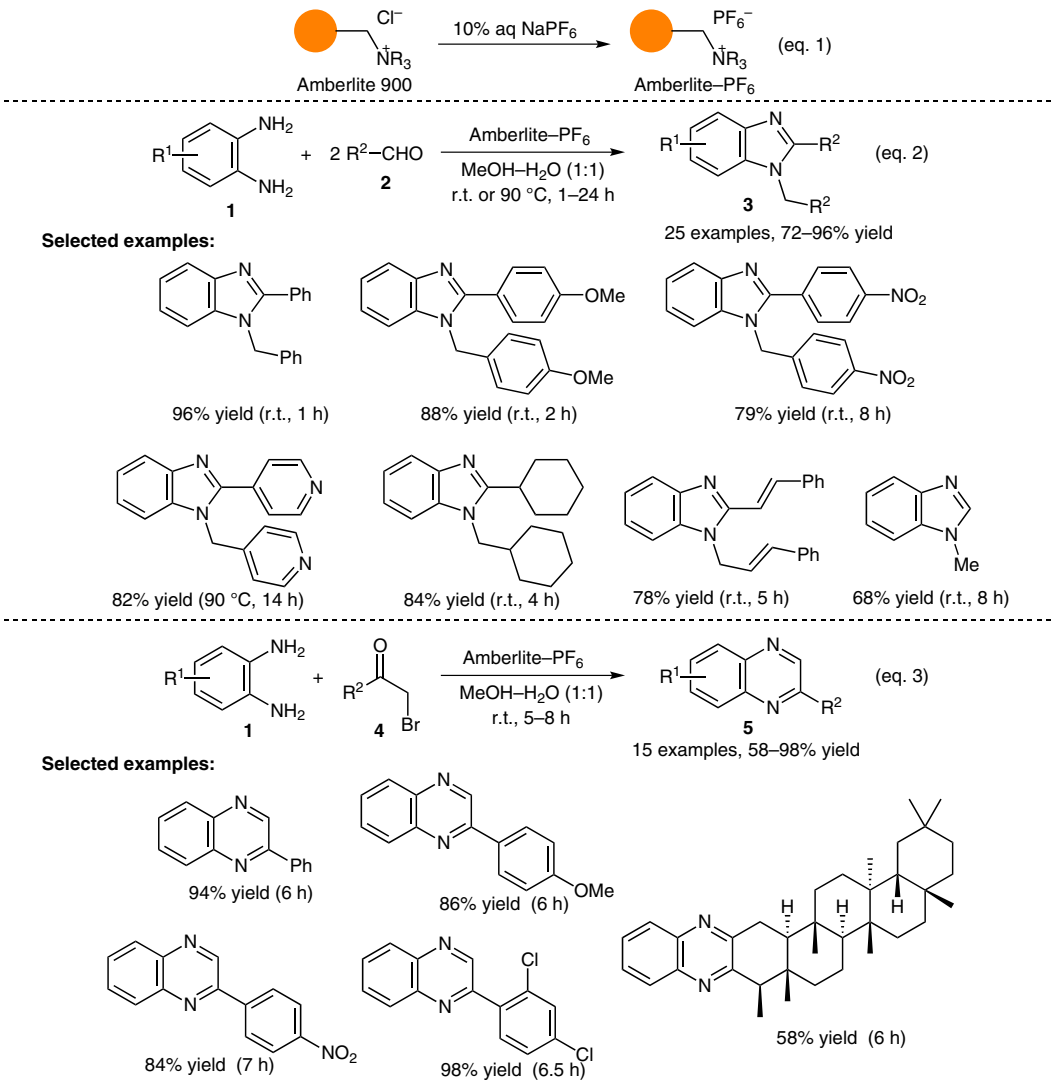
P. GHOSH,* A. MANDAL (UNIVERSITY OF NORTH BENGAL, DARJEELING, INDIA)
Synthesis of Functionalized Benzimidazoles and Quinoxalines Catalyzed by Sodium Hexafluorophosphate Bound Amberlite Resin in Aqueous Medium
Tetrahedron Lett. **2012**, *53*, 6483–6488.

Annulation Reactions Catalyzed by Amberlite-Bound Hexafluorophosphate



Significance: Amberlite resin-bound hexafluorophosphate (Amberlite-PF_6) was prepared by treatment of Amberlite 900 with aqueous $NaPF_6$ (eq. 1). In the presence of Amberlite-PF_6, the annulation of phenylenediamines **1** with aldehydes **2** took place to give the corresponding benzimidazoles **3** (25 examples, 72–96% yield).

Comment: The binding of hexafluorophosphate on Amberlite resin was confirmed by IR spectra (557 and 832 cm^{-1}), though other characterizations were not given. Phenylenediamines **1** also reacted with α-bromoketones **4** in the presence of Amberlite-PF_6 to give the corresponding quinoxalines **5** via an aromatization step.

SYNFACTS Contributors: Yasuhiro Uozumi, Makoto Nagaosa
Synfacts 2013, 9(1), 0113 Published online: 17.12.2012
DOI: 10.1055/s-0032-1317917; **Reg-No.:** Y14612SF

2013 © THIEME STUTTGART • NEW YORK

Category
Polymer-Supported Synthesis

Key words
catalysis
Amberlite
diamines
benzimidazoles
quinoxalines

This document was downloaded for personal use only. Unauthorized distribution is strictly prohibited.