

CBC SEMINAR ANNOUNCEMENT



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Nitrogen Functionalization with 2-Azido-1,3-dimethylimidazolium Salts

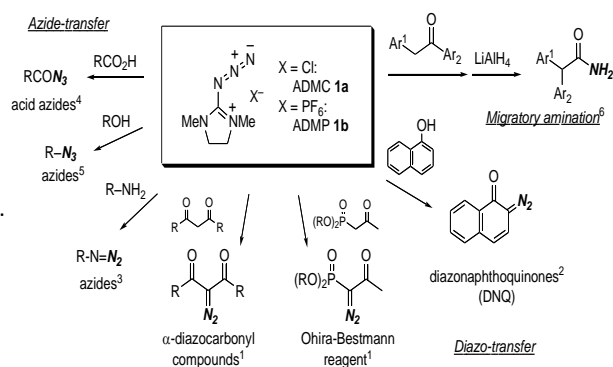
2-Azido-1,3-dimethylimidazolium salts **1** were found to be used for various nitrogen functionalization such as amination ($N1$ introduction), diazo-transfer reaction ($N2$ introduction), and azide-transfer reaction ($N3$ introduction).¹⁻⁵

2-Azido-1,3-dimethylimidazolium chloride (ADMC **1a**) and its corresponding hexafluorophosphate (ADMP **1b**) reacted with 1,3-dicarbonyl compounds under mild basic conditions to give 2-diazo-1,3-dicarbonyl compounds in high yields, which are easily isolated because the by-products are highly soluble in water. Naphthols also reacted with ADCM **1a** to give corresponding diazonaphthoquinones (DNQ).

Furthermore, ADMP **1b** shows efficient diazo-transfer ability to primary amines even without the aid of a metal salt such as Cu(II). Using this diazotization approach, various alkyl/aryl azides were obtained directly from corresponding primary amines. In addition, 2-azido-1,3-dimethylimidazolium salts **1** were found to be employed as azide-transfer and amination reagents.

In the presentation, synthetic utility of DNQ will be also discussed.

1. M. Kitamura, N. Tashiro, T. Okauchi, *Synlett* **2009**, 2943.
2. M. Kitamura, N. Tashiro, S. Miyagawa, T. Okauchi, *Synthesis* **2011**, 1037.
3. M. Kitamura, N. Tashiro, R. Sakata, T. Okauchi, T. *Synlett* **2010**, 2503.
4. M. Kitamura, M. Yano, N. Tashiro, S. Miyagawa, M. Sando, T. Okauchi, *Eur. J. Org. Chem.* **2011**, 458.
5. M. Kitamura, N. Tashiro, Y. Takamoto, T. Okauchi, *Chem. Lett.* **2010**, 39, 732.
6. M. Kitamura, T. Koga, M. Yano, T. Okauchi, *Synlett* **2012** *in press*.
7. M. Kitamura, S. Miyagawa, T. Okauchi, *Tetrahedron Lett.* **2011**, 52, 3158.



Date: 29th June 2012 (Friday)
Time: 11:00am – 12:30pm
Venue: NTU SPMS CBC Building Level 2,
Conference Room
Host: Assoc Professor Roderick Bates