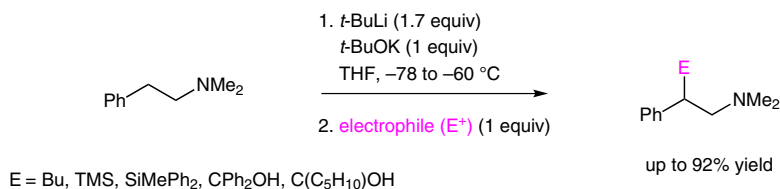


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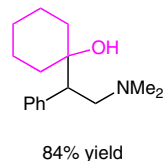
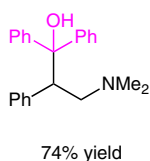
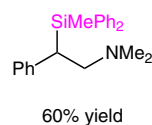
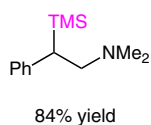
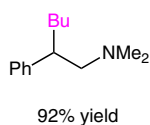
Direct Benzylic Metalation of a Phenethylamine Derivative: Potassium as the Key to Both Generation and Stabilization of a 'Labile Anion'

*Chem. Commun.* **2012**, *48*, 10612–10614.

## Metalation of 2-Phenylethyldimethylamine under Mild Conditions



### Selected examples:



**Significance:** The direct benzylic metalation of 2-phenylethylamine derivatives suffers from  $\beta$ -elimination. The authors found that benzylic metalation of 2-phenylethyldimethylamine can be performed at -78 °C with a mixture of *t*-BuLi and *t*-BuOK. The metalated species was found to be stable up to -40°C.

**Comment:** Interestingly, the metalation cannot be performed with a mixture of *t*-BuLi and *t*-BuOLi. Therefore, the potassium cation seems to be crucial for an efficient conversion. Theoretical and structural studies reveal that potassium is important for the lowering of the barrier of the initial deprotonation, as well as for stabilization of the labile anion.

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Category

Metal-Mediated  
Synthesis

Key words

lithium

benzylic metalation

potassium