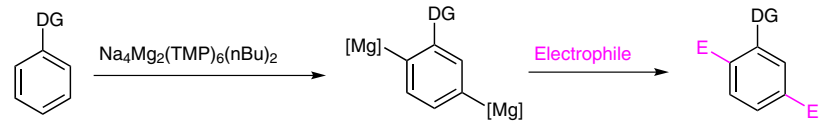
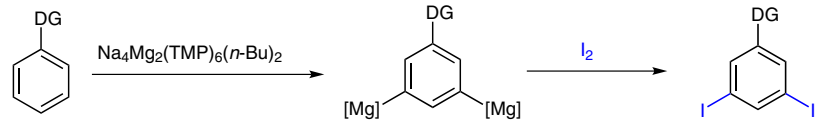
A. J. MARTÍNEZ-MARTÍNEZ, A. R. KENNEDY, R. E. MULVEY,* C. T. O'HARA* (UNIVERSITY OF STRATHCLYDE, GLASGOW, UK)

Directed ortho-meta′- and meta-meta′-Dimetalations: A Template Base Approach to Deprotonation
Science **2014**, *346*, 834–837.

Directed Regioselective 2,5- and 3,5-Dimagnesiations of Substituted Arenes

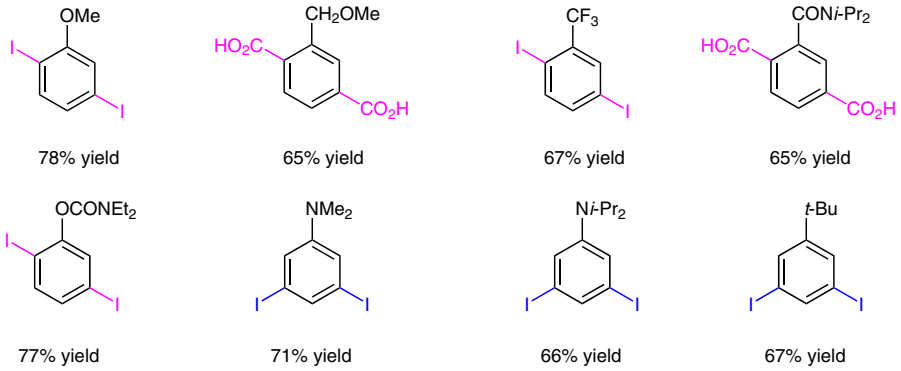


DG = OAlk, CH_2OMe, CF_3, CON*i*-Pr_2, oxazoline, carbamate



DG = NMe_2, N*i*-Pr_2, *t*-Bu

Selected examples:



Significance: The regioselective deprotonation of a directing group substituted arene substrate generally takes place in the *ortho* position, adjacent to the substituent. The authors developed a protocol by which the metalating agent deprotonates the arene at the more distant arene sites. Depending on the nature of the directing group, 2,5- or 3,5-dimetalation is observed. The dimagnesiated species were quenched with electrophiles.

Comment: Interestingly, the used disodium monomagnesium alkylamide forms a template that is responsible for the metalation at the more distant arene sites. The next challenge is the rational design of a range of template bases.

SYNFACTS Contributors: Paul Knochel, Thomas Klatt
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