Category

Metal-Mediated Synthesis

Key words

bismuth

alkenes

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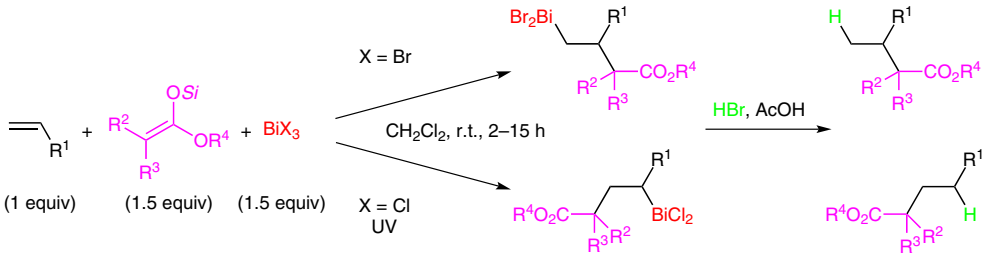
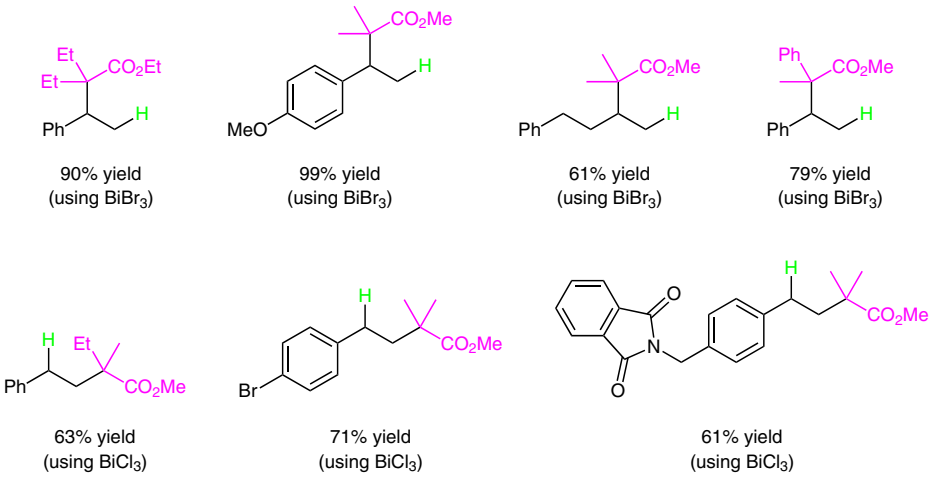
Synthesis of Alkylbismuths by Regiodivergent Carbobismuthination of Simple Alkenes
Chem. Eur. J. **2013**, *19*, 14411–14415.

Bismuth-Mediated Switchable Regioselective Carbometalation



R^1 = Ph, $(CH_2)_2$Ph, Me, Ar
R^2 = Me, Et, Ph, H, -$(CH_2)_5$-
R^3 = Me, Et, Ph, -$(CH_2)_5$-
R^4 = Me, Et, *i*-Pr
Si = TBS, TMS

Selected examples:



Significance: Baba and co-workers report a novel carbobismuthination reaction of alkenes using bismuth trihalides and ketene silyl acetals. Furthermore, in this protocol, the first switch in regioselectivity of the carbometalation using $BiCl_3$ instead of $BiBr_3$ is reported.

Comment: The resultant alkylbismuth compounds react with a range of reagents in order to give functionalized aliphatics. Therefore, reaction with *N*-bromosuccinimide furnishes the bromide, reaction with AIBN and PhSSPh introduces a thiophenyl group, and $PhI(OAc)_2$ in combination with TMSOAc gives the acetate.

SYNFACTS Contributors: Paul Knochel, Andreas K. Steib
Synfacts 2014, 10(1), 0080 Published online: 13.12.2013
DOI: 10.1055/s-0033-1340367; **Reg-No.:** P15713SF