Functional Group Tolerant Kumada–Corriu–Tamao Coupling

**Significance:** The nickel(II) pincer complex 1 could be successfully used to promote a range of Kumada–Corriu–Tamao couplings using both functionalized organomagnesium reagents and alkyl iodides/bromides. Sensitive functional groups, such as ester, cyano, amide, and CF₃ were well tolerated.

**Comment:** This Cₛ₋₆₋₃₃ coupling reaction displays a high generality, proceeds under mild reaction conditions, and leads to fast reaction times. These features make it a valuable tool for the coupling of aryl or heteroaryl organomagnesium reagents with non-activated β-hydride-containing primary and secondary alkyl halides.

**Selected examples:**
- (TMS)₂N aryl, 99% yield (from iodide)
- 77% yield (from bromide)
- 62% yield (from iodide)
- 65% yield (from bromide)
- 85% yield (from iodide)
- 60% yield (from iodide)
- 58% yield (from iodide)
- 70% yield (from iodide)
- 74% yield (from iodide)
- 62% yield (from iodide)
- 77% yield (from bromide)
- 85% yield (from bromide)
- 65% yield (from bromide)
- 74% yield (from bromide, 2.4 equiv)
- 70% yield (from iodide)
- 74% yield (from iodide)
- 65% yield (from bromide)
- 89% yield (from bromide)
- 76% yield (from bromide)
- 74% yield (from bromide, 2.4 equiv)