Nickel-Catalyzed Enantioconvergent Coupling of Racemic Partners

**Significance:** Fu and co-workers report a nickel-catalyzed doubly enantioconvergent alkyl–alkyl coupling of racemic partners that proceeds with unprecedented selectivity. The authors employed a chiral nickel catalytic system that generates the product as a single stereoisomer from racemic propargylic halides and racemic β-zincated amides.

**Comment:** The authors propose that the enantioconvergence of the starting materials is facilitated by a radical intermediate arising from both starting materials. The presence of radical intermediates was inferred by the TEMPO adducts formed from both the electrophile and nucleophile partners in the mechanistic study.

**Selected derivatizations of products:**

**Selected examples:**

**Conditions:**

A) NiCl₂·glyme (10 mol%), (S)-L1 (12 mol%), Ph₂P(CH₂)₅PPh₂ (10 mol%), THF, –5 °C

B) NiCl₂·glyme (12 mol%), (S)-L1 (15 mol%), Ph₂P(CH₂)₅PPh₂ (9 mol%), THF, 5 °C

C) NiBr₂·glyme (10 mol%), (S/R)-L2 (13 mol%), LiCl (1.2 equiv), THF, r.t.

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