Asymmetric Arylation of \( \alpha \)-Chlorosulfones

**Significance:** Gong, Lei, and co-workers report an asymmetric nickel-catalyzed reductive cross-coupling of (hetero)aryl halides with racemic \( \alpha \)-chlorosulfones. The method tolerates a variety of functional groups under mild reaction conditions and furnishes the desired enantioenriched \( \alpha,\alpha \)-disubstituted sulfones in moderate to good yields and with good to excellent enantioselectivity.

**Comment:** The authors propose a radical-chain mechanism consisting of an oxidative addition of the corresponding aryl halide to Ni(0), resulting in a Ar-Ni(II)-halide complex. The formed complex intercepts an \( \alpha \)-sulfonyl radical, furnishing an Ar-Ni(III)-halide-alkyl complex. After reductive elimination, the product is omitted along with a Ni(I)-halide complex or a dimeric Ni(I) species. Furthermore, this formed latter species reacts with the \( \alpha \)-chlorosulfone to generate the alkyl radical and a Ni(II)Cl-halide complex.