Three Is All You Need – Photoredox/Nickel-Catalyzed Protocol to Chiral β-Alkyl-α-Arylated Carbonyls

**Significance:** Chiral α-arylated carbonyls are a common structural motif in many pharmaceuticals and biologically relevant molecules. In this study, the authors developed a visible-light dual photoredox/nickel-catalyzed, three-component coupling to access these types of molecules. Experimental and computational studies were also performed to understand the chemo- and enantioselectivity of the reaction.

**Comment:** The authors demonstrate the versatility of their protocol for a large substrate scope with excellent yields and enantiomeric excess. They use this method to synthesize a lead compound towards piragliatin, a novel glucokinase activator. Using their protocol, the authors generate the corresponding α-arylated carbonyl from tert-butyl acrylate, cyclopentyl-trifluoroborate, and a functionalized aryl bromide. After ester hydrolysis and amide bond formation, the piragliatin lead compound is synthesized in a very efficient fashion.