Visible Light Activation of Boronic Esters Enables Efficient Photoredox C(sp²)–C(sp³) Cross-Couplings in Flow


Photoredox C(sp²)–C(sp³) Cross-Couplings in Flow

**Significance:** The authors report an efficient and high-throughput continuous flow process employing a new method for the photoredox activation of boronic esters.

**Comment:** No additive other than the photoredox catalyst is required for the coupling of the heteroaromatic nitriles and pinacol boronic esters because the nitrogen-containing heterocycle serves as the activator for the boronic ester.

**Selected examples:**

- 61% yield
- 71% yield
- 72% yield
- 83% yield
- 74% yield
- 63% yield
- 65% yield
- 60% yield
- 55% yield

**Ar¹ = Ar**

**Ar² = nitrogen-containing heterocycle**

**R¹ = H, Me, Ph**

**R² = Ar, allyl**