Flow Generated Diazocompounds and Their Use in Cross-Coupling

Significance: Unstable diazo compounds were generated as reactive intermediates in a flow system using a MnO₂-packed cartridge with Hüning’s base. The resulting diazo compounds reacted with carboxylic acids and aryloboronic acids under flow conditions to give the corresponding esters 2a–f in 72–100% yield and the C–C coupling products 3a–f in 67–95% yield, respectively.

Comment: The generated diazo compounds were detected and titrated by in-line IR spectroscopy. The MnO₂-packed cartridge was regenerated by flowing tert-butyl hydroperoxide in dichloromethane and reused twice with a slight loss of activity.