Z.-K. YANG, N.-X. XU, R. TAKITA, A. MURANAKA, C. WANG*, M. UCHIYAMA* (THE UNIVERSITY OF TOKYO, JAPAN)

Cross-Coupling Polycondensation via C–O or C–N Bond Cleavage
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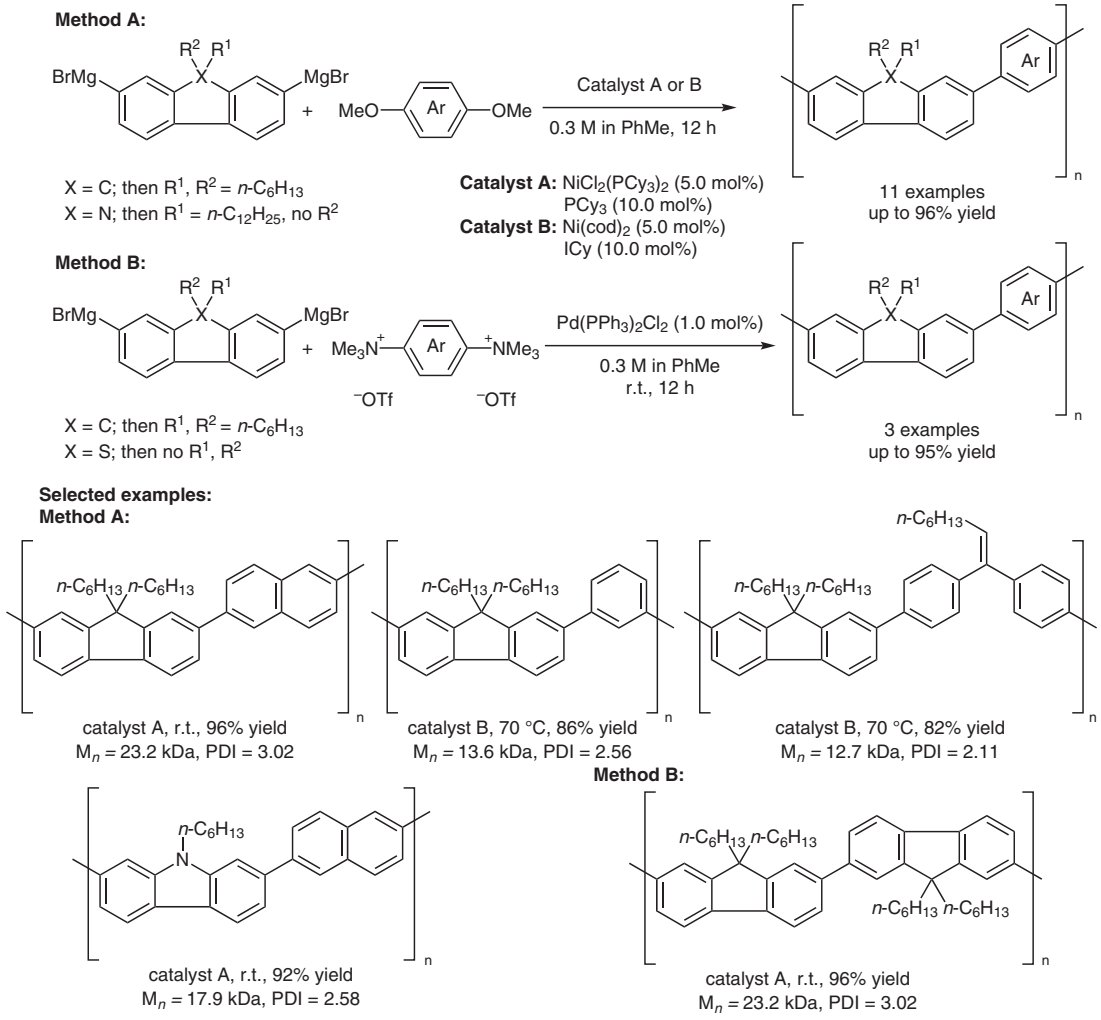
Nickel- or Palladium-Catalyzed Cross-Coupling Polycondensation



Significance: The authors describe a cross-coupling polycondensation of Grignard reagents and various aromatic ethers or ammoniums salts to form π-conjugated polymers with high molecular weight through C–O or C–N bond cleavage. The reaction proceeds under mild conditions in the presence of commercially available Ni or Pd catalysts.

Comment: Interestingly, the optimized reaction conditions showed that the quality and purity of the organometallic compound critically influenced the yield and reactivity of this polycondensation. In the presence of *mono*-Grignard reagents, the chain-growth was terminated and the molecular weight was reduced.

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