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Synthesis of Triphenylene-Based Triptycene via Suzuki–Miyaura Cross-Coupling and Subsequent Scholl Reaction


Two Steps to Porosity

Significance: The authors describe the application of a sixfold Suzuki–Miyaura coupling on 1 followed by a Scholl oxidation to yield the corresponding triphenylenes 3. By using this method, the highly branched iptycene 7 was synthesized in four steps.

Comment: The success of the oxidative formation of the triphenylenes depends on the substitution pattern of the terphenylenes. Compound 3g could be observed but not isolated. The materials are expected to be intrinsically porous; however, absorption properties were not reported.