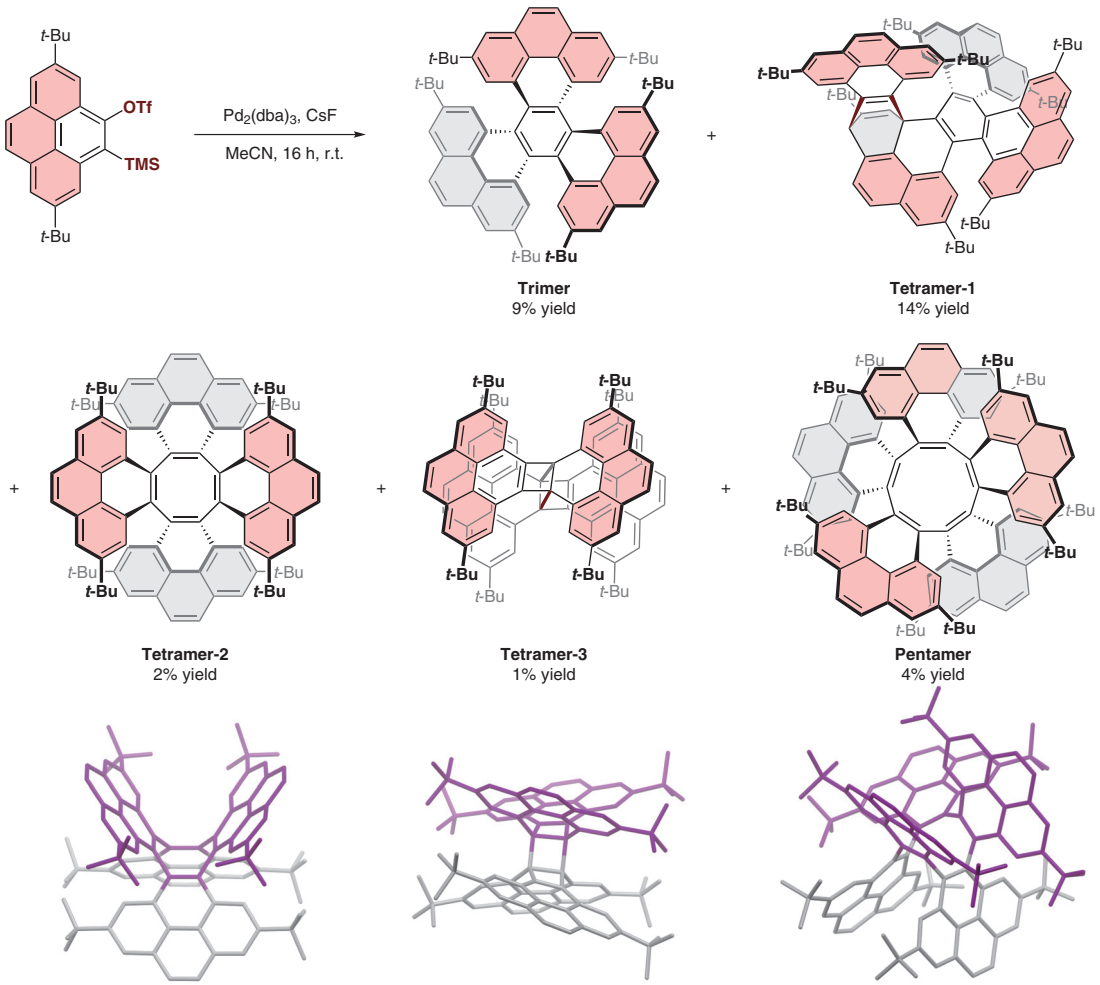
D. POPP, S. M. ELBERT, C. BARWIG, J. PETRY, F. ROMINGER, M. MASTALERZ*
(RUPRECHT-KARLS-UNIVERSITÄT HEIDELBERG, GERMANY)
Palladium-Catalyzed Cyclization of a Pyryne Precursor to Higher Pyrenylenes
*Angew. Chem. Int. Ed.* **2023**, *62*, e202219277 DOI: 10.1002/anie.202219277.

# Pyrenylenes of Varied Size from One Pot




**Significance:** When a palladium-catalyzed cyclization procedure is applied to the Kobayashi-type aryne precursor of a pyrene derivative, a set of cyclic oligomers of pyrenylenes of varied sizes, consisting of two up to five pyrene units, are isolated. A plausible Pd-mediated, step-wise cyclo-oliogomerization mechanism is suggested on the basis of DFT calculations.

**Comment:** One of the most fascinating results presented by the work is revealing the structures of some large oligophenylenes in the crystalline state, including (cyclo)pentaphenylene, which are embedded as the core of various pyrenylenes.

**SYNFACTS Contributors:** Dahui Zhao, Beidi Yu
Synfacts 2023, 19(07), 0657 Published online: 16.06.2023
**DOI:** 10.1055/s-0042-1751918; **Reg-No.:** S07323SF



**Category**
Synthesis of Materials and Unnatural Products

**Key words**
palladium-catalyzed oligocyclization
pyrenylenes
Kobayashi-type aryne
pentaphenylene

Synfact of the Month