Porphyrid–Annulene Hybrid

Significance: Porphyrin–annulene hybrid molecule 2 was synthesized via the tellurium-containing macrocyclic intermediate 1. Treatment of 1 with HCl gave 2 in a good yield, which is attributed to the facility of tellurium extrusion. The substitution of HCl by DCl led to deuterium incorporation at the β-positions of the tellurophene and the pyrrole moieties.

Comment: The hybrid molecule still possesses porphyrin-like structure and aromaticity, and the flexibility of annulene. The four periphery aryl groups are expected to contribute to the stability of 2.