

Chemistry of ethynylene-bridged porphyrinoids: Triphyrin (2.1.1), Porphycene, Porphyrin (2.1.2.1) and further expanded families

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Porphyrin is one of the representative aromatic compounds and has a planar molecular structure with four pyrrole units connected by four *meso*-carbons. We have focused on a dipyrrolethene unit, where two pyrrole units are connected by ethene bridge. By the presence of ethynylene-bridge, porphyrinoids have different properties from traditional porphyrins due to their flexibility, possible *cis-trans* isomerization, coordination ability of double bonds, and etc. We have studied synthesis, structure and properties of various ethynylene-bridged porphyrin families. This presentation will introduce the chemistry of triphyrin (2.1.1)¹, porphycene², porphyrin(2.1.2.1)³ and hexaphyrin(2.1.2.1.2.1)⁴.

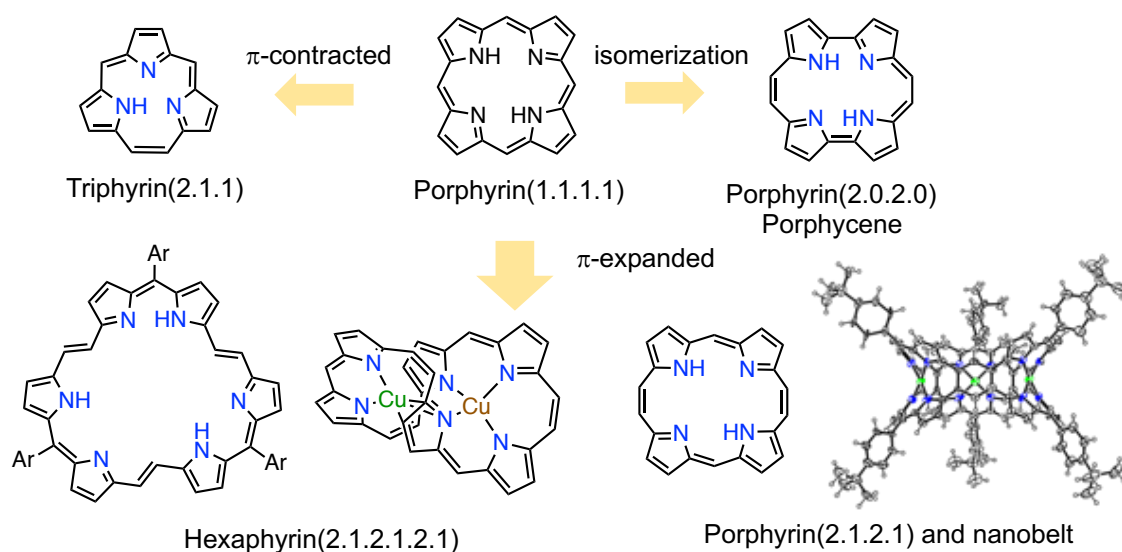


Figure. Porphyrin families including dipyrrolethene bridges.

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