New Research Playground After MBLA

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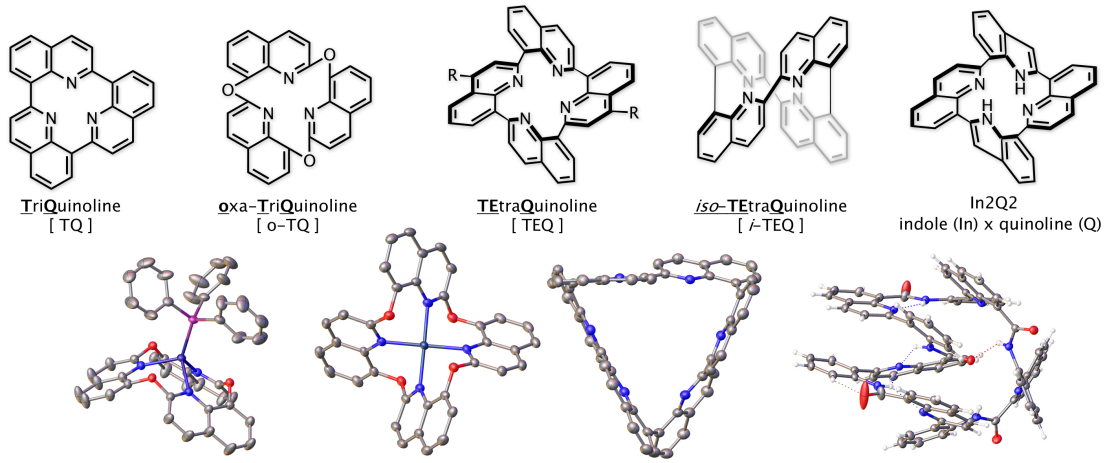
MBLA is a perfect opportunity to change the direction of main research field for young chemists. After ca. 20 years of exploration in asymmetric catalysis, our group is now motivated to design and synthesize quinoline-based cyclic oligomers to develop a new family of functional small molecules. The simplest cyclic trimer, TriQuinoline (TQ), tightly captures proton at the center of the molecule and the resulting cationic aromatic material renders supramolecular complexation via π- π/CH-π interactions in polar media. Embedding oxygen atoms between quinoline units allows TQ to acquire a non-flat architecture, and the thus-formed oxa-TriQuinoline (o-TQ) serves as a bowl-shaped tridentate ligand to Cu(I), exhibiting catalysis, supramolecular complexation, and aggregation-induced emission.[1] Simple incrementation of a quinoline unit gave rise to a saddle-shaped rigid tetramer, TEtraQuinoline (TEQ), which is regarded as a chiral C_2-symmetric porphyrin-like material.[2] A distinct quinoline tetramer with alternative ring connectivity, *iso*-TEQ, and an indole and quinoline hybrid molecule, In2Q2, are also presented. Other unpublished fun molecules are also discussed with their unique X-ray structures and fucntions.



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