Meso/β-Conjugated Corrole-BODIPY Hybrids: Synthesis, Structures and Investigation of Photophysical Properties.

Biju Basumatary, Jeyaraman Sankar*

Department of Chemistry, Indian Institute of Science Education and Research Bhopal, Indore Bypass Road, Bhopal, 462066, India. E-mail: sankar@iiserb.ac.in; Tel: +91-755-6692-334

Abstract:

Corrole conjugated with BODIPY either through *meso*-or *β*-position have been synthesized, structurally characterized, and photophysical properties were investigated. The Ga(III)corrole–BODIPY triad (**1**) exhibits polarity dependent corrole emission due to photoinduced electron transfer (PeT). The triad also exhibits unprecedented crystal emission, which is not known for a corrole derivative, due to unique packing.[1] On the other hand, free base corrole–BODIPY dyad (**2**) exhibits complete quenching of corrole emission due to PeT, however the emission can be revoked by the deprotonation of corrole with DBU or basic anions.[2]

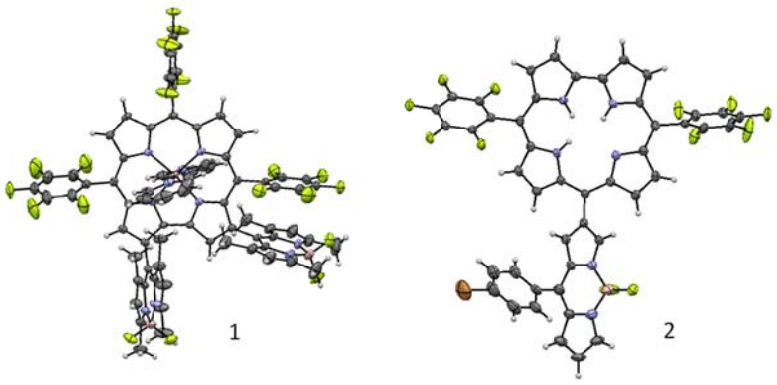

Figure 1: Structure of Corrole-BODIPY triad (1) and dyad (2)

References and Notes:

(1) Basumatary, B.; Ramana Reddy, R. V.; Bhandary, R.; Sankar, J. *Dalton Trans*., **2015**, *44*, 20817
(2) Basumatary, B.; Sekhar, A. R.; Ramana Reddy, R. V.; Sankar, J. *Inorg. Chem.*, **2015**, *54*, 4257–4267