

Bis-naphthobipyrrolyl BODIPY dimer synthesized from bis-naphthobipyrrolyl BODIPY, shows an impressive absorption ($\lambda_{\text{max}} = 769 \text{ nm}$) and emission ($\lambda_{\text{max}} = 825 \text{ nm}$) maxima in the NIR region. Moreover, solid state structure shows interesting helical arrangement of two monomers. Looking at the necessity in development of longer-chain oligopyrroles for new multinuclear single helicates that are stable against racemization, BODIPY dimer with appropriate substituents may be a potential candidate to study in this way.

Reaction between naphthobipyrrole dialdehyde and naphthobipyrrole leads to formation of linear π -extended hexaphyrin. This linear hexaphyrin was successfully converted to its corresponding mono-BF₂ complex that shows NIR absorption even above 900 nm. However, attempt to synthesize its bis-BF₂ complex is so far not successful.

In summary, an attempt has been made to synthesize and explore various conformationally rigid π -extended porphyrinoids derived from alkylated naphthobipyrroles. Dramatic improvements in both the linear and non-linear optical properties were observed in these porphyrinoids. These alkylated naphthobipyrroles and its linear analogues can also be utilized for synthesizing many other π -extended porphyrinoids such as corrole, smaragdyrins, octaphyrins etc. Our initial findings also suggest possible exploration of naphthobipyrrole derived porphyrinoids in terms of organic magnetic material. We believe that these findings will be considered as an important addition towards the emergent area of π -extended porphyrinoids.