分類C　*多元研 IMRAM　拠点利用研究者　IF=5.771

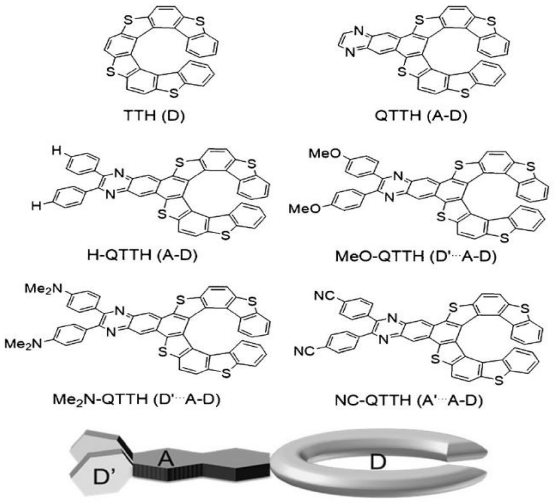
Chemistry - A European Journal
22(2016),4263–4273
Published online February,11, 2016
DOI: 10.1002/chem.201504048

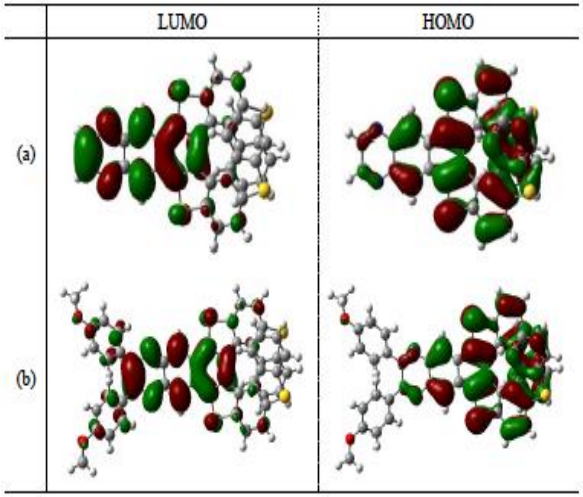
“プッシュープル型”テトラチオ[9]ヘリセンの励起状態ダイナミックスと円偏光発光の制御

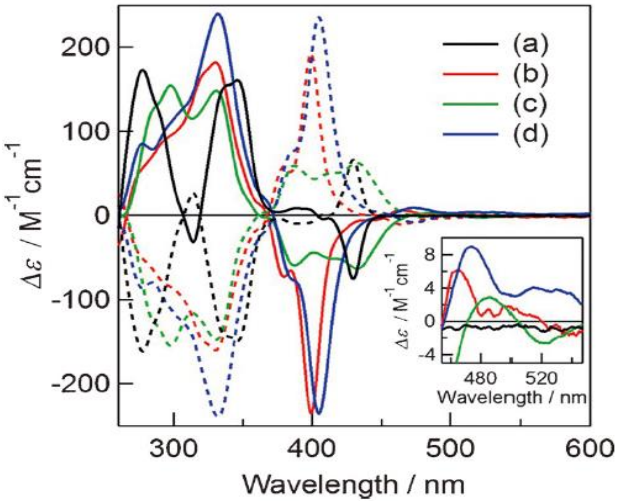
（東北大多元研）荒木保幸・和田健彦、（慶応理工）山本勇樹、酒井隼人、坂上知、羽曾部卓（奈良先端大）河合壮

Synthetic Control of the Excited-State Dynamics and Circularly Polarized Luminescence of Fluorescent "Push-Pull" Tetrathia[9]helicenes

Y.Yamamoto, H.Sakai, J. Yuasa,Y. Araki, T. Wada, T.Sakanoue, T. Takenobu, T. Kawai, T. Hasobe







ベンゼン環が非平面的に共役したヘリセン誘導体において、高い蛍光量子収率を示す報告例は極めて少ない。本研究では励起ダイナミクスの制御と円偏光発光制御に取り組みプッシュープル型置換基を導入した新規[9]ヘリセン誘導体を合成し、高い発光特性と非対称性因子の達成に成功した。

A series of fluorescent “push-pull” tetrathia[9]helicenes based on quinoxaline (acceptor) fused with tetrathia[9]helicene (donor) derivatives was synthesized for control of the excited-state dynamics and circularly polarized luminescence (CPL) properties. As a consequence, significant enhancements in the fluorescence quantum yields (Φ_{FL}) and the value of anisotropy factor g_{CPL} were achieved.