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Title: A room temperature discotic mesogenic dyad based-on triphenylene and pentaalkynylbenzene

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Keywords: Triphenylene

Pentaalkynylbenzene Columnar hexagonal Charge transfer complexes

Hybrid dyad

Issue Date: 2014

Publisher: Elsevier Ltd

Citation: Tetrahedron Letters, 55(42), pp.5836-5840.

Abstract: A facile synthesis of a novel room temperature discotic mesogenic dyad based on triphenylene and

pentaalkynylbenzene linked via flexible alkyl spacer is reported. The thermotropic liquid crystalline (LC) property of the compound was investigated by polarizing optical microscopy (POM), differential scanning calorimetry (DSC), and X-ray diffractometry (XRD). The LC property of the dyad was further manipulated by preparing charge transfer (CT) complexes with trinitrofluorenone (TNF). The compound self-assembles into a columnar hexagonal mesophase and exhibits an excellent fluorescent emission property which has possible potential for various opto-electronic

applications.

URI: https://www.sciencedirect.com/science/article/pii/S0040403914014440?via%3Dihub

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