

Synthesis and liquid crystalline properties of a disc-shaped molecule with azobenzene at the periphery

Abstract

A triphenylene-based novel liquid crystal was synthesised whose peripheral cores are six rod-like azobenzene moieties

linked through alkyl chains. A disc-shaped molecule 2,3,6,7,10,11-hexakis-[{4-(4-nitrophenylazo)phenoxy}hexyloxy]triphenylene was prepared by using a ferric chloride oxidative trimerisation of 1,2-bis-[{4-(4-nitrophenylazo)phenoxy}hexyloxy]benzene. Differential scanning calorimetry and polarising optical microscopy analysis revealed the existence of a nematic mesophase. 2005 Elsevier Ltd. All rights reserved.

Discotic