

## Chiral liquid-crystalline “Janus-type” fullerodendrimers

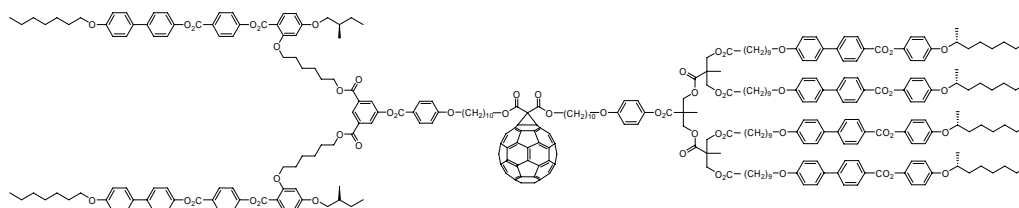
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A new class of “Janus” liquid crystal macromolecules has been prepared from two different chiral dendrons. The poly(aryl ester) dendron<sup>(1)</sup> and the poly(aliphatic ester) dendron<sup>(2)</sup> display chiral nematic and chiral smectic phases, respectively. From the point of view of supramolecular chemistry, it is of interest to study the mesomorphic properties as well as the organization of such heterodendrimers.

Fullerodendrimers have been synthesized via the Bingel reaction<sup>(3)</sup> from mixed malonates containing the above-mentioned dendrons (one example is shown below). Their liquid-crystalline properties have been studied to explore the influence of each dendron (generation of the dendrons, nature of the mesogenic groups) on the supramolecular organization within the liquid-crystalline phases. The presence of the redox-active fullerene unit in ferroelectric liquid crystals could lead to materials with interesting optical and electrochemical properties.

- (1) S. Campidelli, C. Eng, I. M. Saez, J. W. Goodby, R. Deschenaux, *Chem. Commun.*, **2003**, 1520.
- (2) P. Busson, J. Örtengren, H. Ihre, U. W. Gedde, G. Andersson, A. Hult, *Macromolecules*, **2001**, *34*, 1221.
- (3) C. Bingel, *Chem. Ber.*, **1993**, *126*, 1957.



**1**

**Figure 1:** Structure of the Janus-type fullerodendrimer containing the poly(aryl ester) dendron and the poly(aliphatic ester) dendron of first and second generation, respectively.