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Title:	Supramolecular self-assembly of thiol functionalized pentaalkynylbenzene-decorated gold nanoparticles exhibiting a room temperature discotic nematic liquid crystal phase
Authors:	Gupta, Monika (/jspui/browse?type=author&value=Gupta%2C+Monika) Pal, S.K. (/jspui/browse?type=author&value=Pal%2C+S.K.)
Keywords:	Pentaalkynylbenzene (PA) Gold nanoparticles Nematic liquid crystal
Issue Date:	2018
Publisher:	Royal Society of Chemistry
Citation:	Journal of Materials Chemistry C, 6(9), pp. 2303-2310
Abstract:	Thiol terminated pentaalkynylbenzene (PA) units were synthesized for coating on gold nanoparticles (GNPs) in order to obtain materials with a combination of the properties of GNPs and discotic nematogens. The PA unit with the longest terminal alkyl spacer was found to exhibit a discotic nematic (ND) mesophase at room temperature which was preserved even after coating them on GNPs. The effect of GNPs on the orientational order parameter and the dielectric properties of the ND mesophase have been investigated from various physical measurements. To the best of our knowledge, this is the first example of a room-temperature discotic nematic liquid crystal made of gold nanoparticles.
Description:	Only IISERM authors are available in the record.
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