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Title:	Hexacatenars Exhibiting π - π Driven Supergelation, Aggregation Induced Blue Light Emission and Thermochromism
Authors:	Gupta, Monika (/jspui/browse?type=author&value=Gupta%2C+Monika) Pal, S.K. (/jspui/browse?type=author&value=Pal%2C+S.K.)
Keywords:	Polycatenars Supergelation Thermochromism Blue Light Emission
Issue Date:	2016
Publisher:	Wiley-Blackwell
Citation:	ChemistrySelect, 1(16), pp. 5107-5120
Abstract:	Two series of five ring polycatenars, which vary from each other with respect to the position of connection to the central benzene ring are reported. The overall shape of the molecule plays a major role than the number of flexible tails in the periphery in dictating the self-assembly (liquid crystallinity and gelation) and the photophysical behavior. Tetracatenars were crystalline and meta-substituted compounds exhibited reduced tendency to stabilize the mesophase. In the para-substituted series, all the hexacatenars exhibited columnar hexagonal phase. p-Substituted hexacatenar with n-dodecyloxy tails exhibited thermochromism, with the highly emissive Colh phase and non-emissive soft crystal phase. Three p-substituted compounds exhibited supergelation exclusively promoted by π - π interactions. Besides the capability to form self-standing, moldable gel, one of the compounds exhibited technologically important aggregation-induced blue light emission. The columnar order and emissive nature in the aggregated state makes these molecules promising for the application in emissive displays.
Description:	Only IISERM authors are available in the record.
URI:	https://chemistry-europe.onlinelibrary.wiley.com/doi/abs/10.1002/slct.201600927 (https://chemistry-europe.onlinelibrary.wiley.com/doi/abs/10.1002/slct.201600927)
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