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Title:	Electroluminescent room temperature columnar liquid crystals based on bay-annulated perylene tetraesters††
Authors:	Gupta, Monika (/jspui/browse?type=author&value=Gupta%2C+Monika) Pal, S.K. (/jspui/browse?type=author&value=Pal%2C+S.K.)
Keywords:	Room temperature Perylene tetraesters Liquid crystals Bay-annulated
Issue Date:	2017
Publisher:	Royal Society of Chemistry
Citation:	Journal of Materials Chemistry C, 5(7), pp.1767-1781.
Abstract:	Room temperature columnar liquid crystals with a wide thermal range, based on bay-annulated perylene tetraesters are reported. Through the incorporation of heteroatoms like N, S and Se in the bay position of the perylene tetraester the emission behavior in the solution state has been effectively tuned, where the N, S and Se-annulated derivatives showed bright green, blue and weak yellowish green fluorescence. The electroluminescence behavior of these compounds has been explored as emissive layers in organic light emitting diodes. Further, a remarkable improvement in the emission was achieved, when these molecules were doped in a matrix of polyvinyl carbazole (PVK), which is due to a combination of Förster resonance energy transfer from the host to the guest and charge carrier trapping in the emissive layer.
Description:	Only IISERM authors are available in the record.
URI:	https://pubs.rsc.org/en/content/articlelanding/2017/tc/c6tc04166c#!divAbstract (https://pubs.rsc.org/en/content/articlelanding/2017/tc/c6tc04166c#!divAbstract) http://hdl.handle.net/123456789/2671 (http://hdl.handle.net/123456789/2671)
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