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Title:	An electron-deficient tris(triazole)-based discotic liquid crystal that exhibits fast electron transport
Authors:	Dhingra, Shallu (/jspui/browse?type=author&value=Dhingra%2C+Shallu) Bala, Indu (/jspui/browse?type=author&value=Bala%2C+Indu) De, Joydip (/jspui/browse?type=author&value=De%2C+Joydip) Gupta, Santosh Prasad (/jspui/browse?type=author&value=Gupta%2C+Santosh+Prasad) Pandey, Upendra Kumar (/jspui/browse?type=author&value=Pandey%2C+Upendra+Kumar) Pal, Santanu Kumar (/jspui/browse?type=author&value=Pal%2C+Santanu+Kumar)
Keywords:	electron-deficient tris(triazole)-based liquid crystal
Issue Date:	2021
Publisher:	Publishing RCS
Citation:	Journal of Materials Chemistry C, 9(17), 5628–5632.
Abstract:	In this study, a C3-symmetric star-shaped discotic mesogen has been reported based on an electron-deficient tris(triazole) central rigid core functionalized with three peripheral trialkoxyphenyl units. The mesogen exhibits an enantiotropic columnar hexagonal (Colh) phase that can sustain over a significant temperature range. When used in space-charge limited current (SCLC) devices, it showed ambipolar charge transport behavior with high electron mobility (μ_e) of $1.61 \times 10^{-2} \text{ cm}^2 \text{ V}^{-1} \text{ s}^{-1}$ at ambient temperature. The finding is sufficiently significant to warrant their use in organic electronic devices.
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