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Title: Molecular Engineering for the Development of a Discotic Nematic Mesophase and Solid-State Emitter in Deep- Blue OLEDs.

Authors: De, Joydip (/jspui/browse?type=author&value=De%2C+Joydip)

Yadav, Rahul Singh (/jspui/browse?type=author&value=Yadav%2C+Rahul+Singh)

Joshi, Mayank (/jspui/browse?type=author&value=Joshi%2C+Mayank)

Choudhury, Angshuman Roy (/jspui/browse?

type=author&value=Choudhury%2C+Angshuman+Roy)

Keywords: Molecules

External quantum efficiency

Issue Date: 2021

Publisher: ACS Publications

Citation: The Journal of Organic Chemistry, 86(10), 7256–7262.

Abstract: A unique strategy for the attainment of a discotic nematic (ND) mesophase is reported consisting

of a central benzene core to which are attached two 4-alkylphenyl and two 4-pentylbiphenyl moieties diagonally via alkynyl linkers. The rotational nature and incompatibility of unequal phenylethynyl units led to the disruption of  $\pi-\pi$  interactions within cores that aids to the realization of ND phase and favors high solid-state emission. When used in OLEDs, compounds act as an efficient solid-state pure deep-blue emitter with Commission Internationale de

L'Eclairage (CIEx,y) coordinates of (0.16, 0.07).

Description: Only IISERM authors are available in the record.

https://pubs.acs.org/doi/10.1021/acs.joc.1c00742 (https://pubs.acs.org/doi/10.1021/acs.joc.1c00742)

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