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Indigo – A biodegradable, low-cost organic semiconductor for device applications ZHENGJUN WANG[1], Department of Physics and Astronomy, West Virginia University, KONSTANTINOS SIERROS, Department of Mechanical & Aerospace Engineering, West Virginia University, DIMITRIS KORAKAKIS, Lane Department of Computer Science and Electrical Engineering, West Virginia University, MOHINDAR S. SEEHRA[2], Department of Physics and Astronomy, West Virginia University — In recent years, the use of organic semiconductors for device applications has attracted considerable attention. In this paper, recent results on indigo-based devices will be reviewed. Indigo is a biodegradable and a low-cost semiconductor with band gap of 1.7 eV and its use in field effect transistors and circuits has been recently reported [1]. In our work, we have recently developed indigo-based write-once-read-many-times (WORM) memory device [2]. Details of the results and their interpretation in terms of interfacial dipoles will be presented.

[1] M. Irimia-Vladu et al, Adv. Mater. 24, 375 (2012).
[2] Z. Wang, K. Sierros, D. Korakakis, and M. S. Seehra, Appl. Phys. Lett. (to be submitted).

[1]Zhengjun Wang is pursuing PhD in Physics and he is currently working on organic WORM memory device.
[2]Fellow, the Institute of Physics (U.K.), 2001 - Current Fellow, the American Physical Society, 1984 - Current Research Fellow, A. P. Sloan Foundation, 1973-1976

Zhengjun Wang
Department of Physics and Astronomy, West Virginia University

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