

Ph.D. Open Seminar

Department of Chemistry, IISER Bhopal

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Topic: “Synthesis of functionalized Perylenemonoimides with tailored electro-optical properties and their applications in sensing, white-light emission and memory devices”

Date: July 02, 2018

Time: 11:00 AM

Venue: ABII-401

Abstract: Among Rylene dyes family, perylenemonoimide (PMI), and their derivatives are one of the most versatile and robust chromophores with numerous applications in both academia and industry.¹⁻² They have their own importance among the other colorants because of their outstanding tuneable photophysical properties and offer significant interest in the field of organic electronics, bio-imaging, single-molecule spectroscopy, artificial photosynthesis, formation of supramolecular architecture, charge transport, *etc.*² During my doctoral research, I have developed various synthetic methods for making functional PMI dyes. Later, their electro-optical properties were investigated extensively.^{3, 4} Further, evaluation of their possible applications as organic functional materials in the fields of sensing (electron rich aromatic amines),³ white-light emission,⁵ memory devices,⁶ detection of organic peroxides,⁷ and for making NIR materials⁸ was achieved (shown in Figure 1).

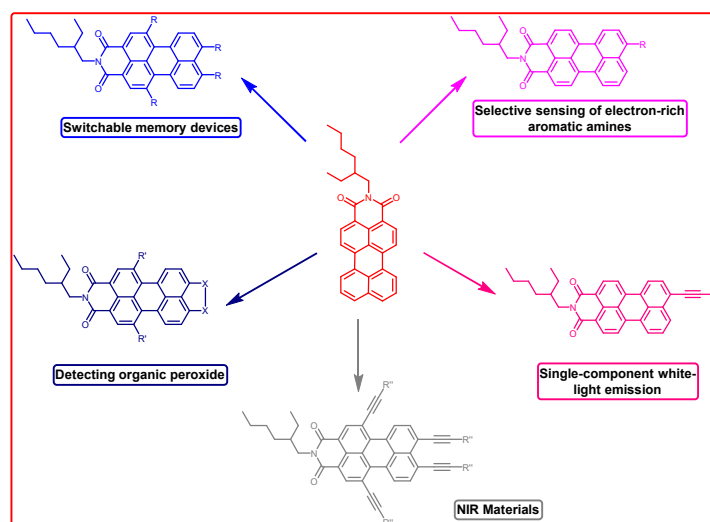


Figure 1: Functionalized PMI derivatives and their applications

References:

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