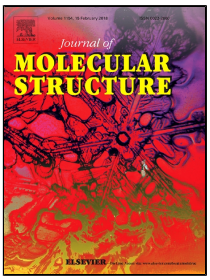
Accepted Manuscript



Delocalization of π electrons and trapping action of ZnO nanoparticles in PPY matrix for hybrid solar cell application

Rajinder Singh, Ram Bilash Choudhary, Rohit Kandulna

PII:	S0022-2860(17)31633-2
DOI:	10.1016/j.molstruc.2017.12.013
Reference:	MOLSTR 24632
To appear in:	*Journal of Molecular Structure*
Received Date:	12 September 2017
Revised Date:	17 November 2017
Accepted Date:	05 December 2017

Please cite this article as: Rajinder Singh, Ram Bilash Choudhary, Rohit Kandulna, Delocalization of π electrons and trapping action of ZnO nanoparticles in PPY matrix for hybrid solar cell application, *Journal of Molecular Structure* (2017), doi: 10.1016/j.molstruc.2017.12.013

Highlights

- PPY-ZnO nanomposites were synthesized via in-situ polymerization
- Incorporation of ZnO into PPY provided semi-crystalline behavior
- Electron mobility increased due to higher size of the grain domain
- PPY-ZnO (1:4) nanocomposite imparted better thermal stability
- Almost 1.2 times increase in peak current occurred for PPY-ZnO (1:1)