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Title of the Ph.D. Thesis: Studies on Erbium doped TiO₂/Ag nanoparticles based plasmonic UV photodetectors

Publication:

1. **Sanjib. Mondal**, A, Ghosh, M. R. Piton, J. P. Gomes, J, F. Felix, Y. G. Gobato, H. V. Galeti, B. Choudhuri, S. M. M. D. Dwivedi, M. Henini, A. Mondal. "Investigation of optical and electrical properties of erbium-doped TiO₂ thin films for photodetector applications," *Journal of Materials Science: Materials in Electronics* 29, (2018), pp-19588–19600. doi.10.1007/s10854-018-0090-1
2. **Sanjib. Mondal**, C. Ghosh, S.M.M. Dhar Dwivedi, A. Ghosh, S. Sushama, S. Chakrabarti, A. Mondal, "An experimental and theoretical understanding of a UV photodetector based on Ag nanoparticles decorated Er-doped TiO₂ thin film," *Ceramics International*, 47, (2021), pp-14879-14891, doi:10.1016/j.ceramint.2020.07.311
3. **Sanjib Mondal**, Anupam Ghosh, Shyam Murl Manohar Dhar Dwivedi, Avijit Dalal, Aniruddha Mondal, "Detailed experimental and theoretical analysis of the high-temperature current conduction properties of Er-doped TiO₂ thin film based diodes", *Materials Science in Semiconductor Processing* 130 (2021), pp-105834, doi.10.1016/j.mssp.2021.105834
4. Shyam Murl Manohar Dhar Dwivedi, Anupam Ghosh, Sagarika Deepthy, Moumita Maji, Rini Lahiri, **Sanjib Mondal**, Chiranjib Ghosh, Avijit Dalal, Aniruddha Mondal, Monidipa Ghosh, "Detection technique for vitamin D₃ using Er-doped TiO₂ nanowire-based UV photodetector," *J. of Nanophotonics*, 14(4), 046001 (2020). doi.10.1117/1.JNP.14.046001

Papers Presented in Nation/International Conference:

1. "Improved performance of Erbium doped TiO₂ thin film based UV detector"
Sanjib Mondal, Aniruddha Mondal*
National Conference on Recent Developments in Nanoscience & Nanotechnology (NCRDNN)-2019, 29th-31st January, Organized by School of Materials Science and Nanotechnology, Jadavpur University, Kolkata
2. "Plasmonic enhancement on detectivity of Erbium doped TiO₂ thin film based Schottky diode"
Sanjib Mondal, Aniruddha Mondal
Functional Materials and Applied Physics (FMAP-2021), May 14-15, 2021.Organized by Dept. of Physics, S V National Institute of Technology (SVNIT), Surat.