

List of Publications arising from the thesis

A. Journal:

a. Published:

1. “Study of surface-bulk mass transport and phase transformation in nano-TiO₂ using hyperfine interaction technique”, **D. Banerjee**, S.K. Das, S.V. Thakare, P.Y. Nabhiraj, R. Menon, R.K. Bhandari, K. Krishnan, *J. Phys. Chem. Solids*, **2010**, *71*, 983–987.
2. “Zr-doped rutile TiO₂: a nuclear quadrupole interaction study”, **D. Banerjee**, S. K. Das, P. Das, S. V. Thakare, T. Butz; *Hyperfine Interaction*, **2011**, *197*, 193–198.
3. “Effect of γ -dose on the crystal structure and leaching behaviour of TiO₂ matrix labeled with ¹⁸¹Hf/¹⁸¹Ta tracer”, **D. Banerjee**, R. Guin, S. K. Das, S. V. Thakare, *J. Radioanal. Nucl. Chem.*, **2011**, *290*, 119–121.
4. “Nuclear quadrupole interaction at ¹⁸¹Ta in hafnium dioxide fiber: Time differential perturbed angular correlation measurements and ab initio calculations”, **D. Banerjee**, P. Das, R. Guin, S. K. Das, *J. Phys. Chem. Solids*, **2012**, *73*, 1090-1094.
5. “Study of the Role of Metal Core on the Thermal Behavior of Ag@TiO₂ Core-Shell Nanoparticles”, **D. Banerjee** and S. K. Das, *J. Radioanal. Nucl. Chem.*, **2014**, *300*, 99-105.

b. Communicated:

1. **D. Banerjee**, S.K. Das, S. V. Thakare, P.Y. Nabhiraj, R. Menon; Nano-phase Evolution of HfO₂ Thin Film on Si (111) Surface: A Nuclear Quadrupole Interaction Study, *Thin Solid Films*.

B. Conferences:

1. **D. Banerjee**, R. Guin & S.K. Das; Study of Leaching Property of TiO₂ matrix labeled with ¹⁸¹Hf, *Nuclear and Radiochemistry Symposium (NUCAR)-2009*.

2. **D. Banerjee** and S. K. Das; Annealing Behavior of Hafnium Oxide Fiber Used as a Target for Radioactive Ion Beam Preparation, *Synthesis and Characterization of Smart Materials-2009*.
3. **D. Banerjee**, P. Ghosh, R.K. Chatterjee and S. K. Das; Hyperfine interaction study of 5% Mn⁺² doped TiO₂, *Condensed Matter Days-2009*.
4. P. Das, **D. Banerjee** and S. K. Das; Electronic and structural properties of anatase and rutile TiO₂ doped with Ta: Experimental study and *ab initio* calculations, *Joint International Conference on HFI and NQI-2010*.
5. **D. Banerjee** and S. K. Das; Nano-phase Hindered Evolution of HfO₂ Thin Film on Si (111) Surface: A Nuclear Quadrupole Interaction Study, *Joint International Conference on HFI and NQI-2012*.
6. **D. Banerjee**, P. Das, S.V. Thakare and S.K. Das; Study of Annealing Behavior of Probe Lattice Interaction in Gr-IVB oxides by Nuclear Quadrupole Interaction, *NUCAR-2013*.
7. **D. Banerjee**, S. Bhattacharya, T. Bhattacharjee and S.K. Das; Fast-slow coincidence measurements with LaBr₃ (Ce) detectors, *NUCAR-2013*.



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