1. Title of the thesis:

Synthesis of Nano Zinc Oxide for Antibacterial Application.

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3. List of publication:

1. P. Bhadra a, M.K. Mitra c, G.C. Das a, R. Dey a, S. Mukherjee b,c Interaction of chitosan capped ZnO nanorods with Escherichia coli; Materials Science and Engineering C. 31 (2011) 929-937

2. P. Bhadra a, M.K. Mitra c, G.C. Das a, R. Dey a, S. Mukherjee b,c Comparative assessment of Chitosan and 3-Aminopropyltriethoxysilane (APTES) embedded ZnO nanomaterials on E.coli Dh5a and S.aureus ATCC 25923 bacterial cell membrane destruction; (Communicated)

3. P. Bhadra a, M.K. Mitra c, G.C. Das a, R. Dey a, S. Mukherjee b,c Surface Functionalization of ZnO nanomaterial through 3-Mercaptobenzoic acid and its antibacterial activity study by direct attachment of these nanomaterials to the E.coli Dh5a and S.aureus ATCC 25923 Bacteria; (Communicated)

4. P. Bhadra a, M.K. Mitra c, G.C. Das a, R. Dey a, S. Mukherjee b,c Synthesis and characterization of different structured ZnO nanomaterial through Polyethylene Glycol along with antibacterial activity study by direct attachment to the E.coli Dh5a and S.aureus ATCC 25923 bacterial cell membrane; (Communicated)
5. **P. Bhadra**, M.K. Mitra, G.C. Das, R. Dey, S. Mukherjee. Synthesis and characterization of 3-APTES capped ZnO nanomaterials along with internalization study for *E.coli* Dh5α and *S.aureus* ATCC 25923 bacteria; (Communicated)

4. **List of Patents**: Nil

5. **List of presentations in National/International conferences**:


