

## **Bibliography**

Date of Birth: 01.01.1970. (1st January' 1970)

Present Position: Professor, Dept. of Physics, The University of Burdwan, Burdwan-713104,  
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**Guest faculty:** Department of Biotechnology, The University of Burdwan (2010-2015)

### **Research area Materials science:**

Study of structural, optical and electrical properties of II-VI semiconducting thin films; Study of structural and electrical properties of mixed oxides/ferrites and their gas sensing properties.

**Ph. D. guidance**      3 (awarded)

### **Projects (PI's)**

1.      UGC minor project (2007 – 2009)
2.      CSIR project (2011-2013)
3.      UGC major project (2012 – 2015)

### **Patent**

“A process for the preparation of an improved sensor useful for the detection of liquid petroleum gas (LPG)” - Patent (CSIR; National) No. 215697 (March, 2008)

### **List of Publications**

1.    “Grain boundary effect in polycrystalline InP films from optical reflectance measurements”  
– P. Mitra, P. Gupta, S. Chaudhuri and A. K. Pal, **Materials Chemistry and Physics** 38 (1)  
(1994) 81 - 86.

2. "Grain boundary barrier height in polycrystalline diamond films produced by dc plasma deposition of CO and hydrogen" – K. K. Chattopadhyay, P. Mitra, S. Chaudhuri and A. K. Pal, **Materials Letters** 18 (1994) 313 - 317.
3. "Electrical properties of boron-doped diamond films prepared by dc plasma deposition of CO + H<sub>2</sub>" – P. Mitra, K. K. Chattopadhyay, S. Chaudhuri and A. K. Pal, **Materials Letters** 21 (1994) 95 - 99.
4. "Influence of fabrication techniques and doping on hydrogen sensitivity of zinc oxide sensors" – A. K. Mukhopadhyay, P. Mitra, D. Chattopadhyay and H. S. Maiti, **Journal of Materials Science Letters** 15 (1996) 431 – 433.
5. "Zinc oxide thin film sensor" – P. Mitra, A. P. Chatterjee and H. S. Maiti, **Materials Letters** 35 (1998) 33 - 38.
6. "A new method to prepare tin dioxide thin film gas sensor" - Anup Kumar Mukhopadhyay, P. Mitra, A. P. Chatterjee and H. S. Maiti, **Journal of Materials Science Letters** 17 (1998) 625 – 627.
7. "Chemical deposition of ZnO films for gas sensors" – P. Mitra, A. P. Chatterjee and H. S. Maiti, **Journal of Materials Science: Material in Electronics** 9 (1998) 441 - 445.
8. "Chemically deposited zinc oxide thin film gas sensor" – A. P. Chatterjee, P. Mitra, & A. K. Mukhopadhyay, **Journal of Materials Science** 34 (1999) 4225 - 4231.
9. "Tin dioxide thin film gas sensor" – A. K. Mukhopadhyay, P. Mitra, A. P. Chatterjee & H. S. Maiti, **Ceramics International** 26 (2) (2000) 123-132.
10. "A wet-chemical process to form palladium oxide sensitizer layer on thin film zinc oxide based LPG sensor" – P. Mitra and H. S. Maiti, **Sensors and Actuators B** 97 (2004) 49-58.
11. "Chemical deposition of ZnO films from ammonium zincate bath" – P. Mitra and J. Khan, **Materials Chemistry and Physics** 98 (2006) 279 - 284.
12. "ZnO thin film as methane sensor" – P. Mitra and A. K. Mukhopadhyay, **Bulletin of Polish Academy of sciences: Technical Sciences** 55 (3) (2007) 281-285.
13. "Effect of Initialization Time on Application Potentiality of a ZnO thin film based LPG Sensor" – P. Mitra and A. Halder, **Materials Research– Ibero American Journal of Materials** 12 (3) (2009) 329 - 332.
14. "Role of Iron diffusion in oxynitride glass" – a Mossbauer and EPR study, T. Das and P. Mitra, **Transactions of Indian Ceramic Society** 69 (2) (2010) 99-101.

15. "Preparation of Nanodimensional CdS by Chemical Dipping Technique and their Characterization" – S. Patra, P. Mitra and S. K. Pradhan, **Materials Research - Ibero American journal of Materials** 14 (1) (2011) 17-20.
16. "Preparation of cadmium-doped ZnO thin films by SILAR and their characterization" – S. Mondal and P. Mitra, **Bulletin of Materials Science** 35 (5) (2012) 751-757. [Springer; ISSN: 0250-4707; IF: 0.6]
17. "Preparation of ZnO Film on p-Si and I-V characteristics of p-Si/n-ZnO" – S. Mondal, K. P. Kanta and P. Mitra, **Materials Research- Ibero American journal of Materials** 16 (1) (2013) 94 - 99.
18. "Effect of Al doping on microstructure and optical band gap of ZnO thin film synthesized by successive ion layer adsorption and reaction" – S. Mondal, S. R. Bhattacharyya and P. Mitra, **Pramana- Journal of Physics**, Vol. 80 (2013) 315-326.
19. "Preparation of Ni doped ZnO thin films by SILAR and their Characterization" – S. Mondal and P. Mitra, **Indian Journal of Physics**, Vol. 87 (2) [2013] 125-131.
20. "Preparation of manganese-doped ZnO thin films and their Characterization" – S. Mondal, S. R. Bhattacharyya and P. Mitra, **Bulletin of Materials Science**, Vol. 36 (2013) 223-229.
21. "Structural, Morphological and LPG sensing properties of Al-doped ZnO thin film prepared by SILAR" – S. Mondal, S. Bhattacharya and P. Mitra, **Advances in Materials science and Engineering**, Vol. 2013 (2013) 6 pages [Hindawi; ISSN: 1687-8434; IF: 0.87]
22. "Synthesis of Nanocrystalline CdS by SILAR and Their Characterization" – Partha Protim Chandra, Ayan Mukherjee and P. Mitra, **Journal of Materials** (2014) 6 pages. [Hindawi; ISSN: 2314-4866]
23. " $H_2S$  sensing characteristics of nanocrystalline zinc ferrite" – S. Bhattacharya, P. Mitra and P. Ghosh, **International Journal of Theoretical and Applied Physics**, Vol. 4 (2014) 1-8.
24. "Synthesis of nanocrystalline CdS thin film by SILAR and their characterization" – A. Mukherjee, B. Satpati, S. R. Bhattacharyya, R. Ghosh and P. Mitra, **Physica E** 65 (2015) 51–55. [Online 30 August 2014]
25. "Microstructural and  $H_2S$  sensitivity of CBD synthesized CdS thin film: Influence of cobalt doping" – A. Mukherjee, M. Fu, P. Ghosh and P. Mitra, **Materials Letters** 141 (2015) 39–42.
26. "Influence of Zn incorporation in CdS: Structural and morphological studies" – A. Mukherjee, M. Fu and P. Mitra, **Journal of Physics and Chemistry of Solids** 82 (2015) 50 -55. [Online 9 March 2015]

27. "Characterization of tin (II) sulphide thin film synthesized by successive chemical solution deposition" – A Mukherjee and P Mitra, **Indian Journal of Physics** 89 (10) (2015) 1007-1012.
28. "Influence of particle size on H<sub>2</sub> and H<sub>2</sub>S sensing characteristics of nanocrystalline nickel ferrite" – P. Ghosh, A. Mukherjee, M. Fu, S. Chattopadhyay and P. Mitra, **Physica E** 74 (2015) 570–575. [Online 30 August 2015]
29. "Structural and optical characteristics of SnS thin film prepared by SILAR" – A. Mukherjee and P. Mitra, **Materials Science-Poland** 33 (2015) 847-851. [DE GRUYTER OPEN]
30. "Microstructural characterization of CBD synthesized CdS thin films: Application as H<sub>2</sub>S sensor" –A. Mukherjee, P. Ghosh, M. Fu, A. A. Aboud and P. Mitra, *Advanced Science Letters* 22 (2016) 179-183.
31. "CT-Guided Aspiration Cytology of Advanced Silicosis and Confirmation of the Deposited Zeolite Nano Particles Through XRay Diffraction A Novel Approach" –A. Bandyopadhyay, K. Majumdar, A. Chakraborty, P. Mitra and S. Nag, *Diagnostic Cytopathology* 44 (2016) 246-249.