

CURRICULUM VITAE

Name: DR. DHANANJOY ROY
M.Sc.(Phys), Ph.D., Post Doc.(France).
Present Status: Associate Professor (W.B.E.S.)
Post Graduate Department of Physics
Barasat Government College,
Barasat, North 24 pgs.
E-mail: roydrdhananjoy@gmail.com
Contact: +91 9474447411/ 9330703402



Date of joining in the Govt. service: **19th February, 2002.**

Teaching experience:

(i) Under Graduate	Hons & Pass courses	since 2002	19 years
(ii) Post Graduate	Theory & Practical	since 2010	11 years

Research Experience: Research experience (in year) 31
[Publications](#) in Peer review Journals 17
Attended [International Conferences](#) 9
P. G. project supervision 16

Research Summary:

Research Stage	Place of research	Period	Work Experience (experimental)
Post-Doctoral fellow	LGEP-SUPELEC, Paris, FRANCE	Feb. 2000- Jan. 2002 (2 years)	Characterization of solar cell grade amorphous/polymorphous/microcrystalline samples by measuring DOS by MPC, diffusion length of minority carriers by SSPG, grain boundary by TEM, photo-induced structural change by light-soaking and annealing, estimation of defects by dangling H-bonds, etc.
Research Associate	I.A.C.S., Jadavpur, Calcutta, INDIA.	Nov. '97 to Jan. 2000	Thin film preparation and characterization of amorphous/ microcrystalline silicon materials and some TCO materials.
Project Scientist	Dept. of Physics, IIT-Kanpur, INDIA	Jan. '97 to Aug. '97	High temperature Superconductor preparation and characterization.
Ph.D.	Dept. of Physics, Univ. of Kalyani, West Bengal, India	1990- 1996 and awarded in 1998	Study of electrical (ac & dc) and magnetic properties of Cu-oxide based high T _c superconductors.

Current Research: Synthesis of nano particles of Zinc Oxide (ZnO) and Aluminum doped zinc Oxide (AZO) by sol gel method. Aim of my work is to study the scope of appliances in the field of nano-Bio medicine as well in virus treatment. One paper with title ‘**Synthesis of Al-doped zinc oxide nano particle TCO material by simple Sol-Gel method**’ has been published (Dhananjay Roy *et al* 2020 *J. Phys.: Conf. Ser.* **1579** 012007) and another paper with title ‘**Aluminum doped nano- Zinc Oxide may be a good carrier for Bio-medicine**’ has been accepted for publication in Springer Nature series publication - Lecture Notes in Bioengineering.

Awards Obtained:

Title	Organization	Year
i) National Scholarship	Govt. of India	1981
ii) University Research Scholarship	University of Kalyani	1990
iii) NET (CSIR) Fellowship	Govt. of India	1992
iv) INDO-FRENCH Post-Doc Fellowship	IFCPAR(INDO-FRENCH)	2000

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 Visited countries: France, Switzerland, Germany, Italy. Spain, England, USA.

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Attended International Conference:

1. Dhananjoy Roy, “Pure nano Zinc Oxide and Aluminum doped Zinc Oxide both are potential members in the family of nano Bio-medicine” Oral presentation in the International Conference AMPHE-2020 at Adamas University, Kolkata, India, 2020.
2. Dhananjoy Roy, Meghasree Basu and Sourav Paul, ‘Synthesis of Al-doped Zinc Oxide nano particle TCO material by simple Sol-Gel method”, Oral presentation in the National Conference NCFMP2020 at Adamas University, Kolkata, India, 2020.
3. J.P. Kleider, M. Gauthier, C. Longeaud, **D. Roy**, O. Saadane and R. Brüggemann, ‘Spectral photoresponses and transport properties of polymorphous silicon thin films’: **EMRS-Strasbourg**, France, 2001.
4. **D. Roy**, C. Longeaud and O. Saadane, ‘Influence of light-soaking and annealing on the microstructure of a-Si:H deposited at 420K’: **ICAMS19**, Nice, France, 2001.
5. **D. Roy**, C. Longeaud, O. Saadane, S. Vignoli, R. Butté, R. Meaudre and M. Meaudre, ‘Evolution with light-soaking of polymorphous materials prepared at 423K’: **ICAMS19, Nice, France**, 2001.
6. C. Longeaud and **D. Roy**, ‘Is interstitial hydrogen playing a role in the Stæbler-Wronski effect?':**Mat. Res. Soc. Symp. Proc., USA**, vol. 664 (2001), A14.4.
7. C. Longeaud, **D. Roy**, P. Choudhuri, N. Dutta Gupta, P. Pratim Ray S. Vignoli, M. Meaudre and R. Meaudre, ‘Properties of silicon films deposited under Argon dilution’: **Mat. Res. Soc. Symp. Proc., USA**, vol. 664 (2001), A23.1.
8. A.K. Barua, Arup Das Gupta, Sankar Mondal, **D. Roy** and Swati Ray, ‘Use of thin n-type microcrystalline layer in improving the performance of double junction a-Si/a-Si structure solar cells’: 11th International Photovoltaic Science and Engineering conference (PECVD II), Japan, Sept. 20-24, 1999.
9. **D. Roy**, ‘Information about vortex state in YBCO (77K0 from V-I measurement at different magnetic field’: International workshop on high Temperature Superconductivity; Ten years after its discovery’: held at Jaipur, India, book edited by K.B. Garg and S.M. Bose, Narosa Publishing, New Delhi, 1996 .

PUBLICATIONS:

17. Dhananjay Roy, "Pure nano Zinc Oxide and Aluminum doped Zinc Oxide both are potential members in the family of nano Bio-medicine" accepted for publication in Springer Nature series publication - Lecture Notes in Bioengineering.
16. Dhananjay Roy, Meghasree Basu and Sourav Paul, 'Synthesis of Al-doped Zinc Oxide nano particle TCO material by simple Sol-Gel method' (Dhananjay Roy *et al* 2020 *J. Phys.: Conf. Ser.* **1579** 012007).
15. Uttam Sinha Mahapatra Sudip Chattopadhyay and **Dhananjay Roy** 'Taming the energy surface and spectroscopy of beryllium of beryllium dimer in its ground electronic state' - *Aureol*, a journal of Barasat Govt. College, published- 2016.
14. A. Gorai and D. Roy, 'A review of Diffusion and Interfacial Reactions in Sandwich Thin-Film Couples' defect and Diffusion Forum, vol. 344 (2013), pp- 107-128.
13. Partha Chowdhuri, Debajyoti Das, Partha Pratim Ray, Namita Dutta Gupta, **Dhananjay Roy** and Christophe Longeaud, 'Correlation between plasma chemistry, microstructure and electronic properties of Si:H thin films prepared with hydrogen dilution': **J. Non-crystalline solids**, vol. 338-340, p-236 (2004).
12. **D. Roy**, Chandan Das, C. Longeaud, F. Houze and S. Ray, 'Correlation between structural and transport properties of silicon thin films deposited at various substrate temperature': **J. Vac. Sci. technol. B**, vol. 21, no. 3, (2003) 1048-1054.
11. C. Longeaud, **D. Roy** and O. Saadane, 'Role of interstitial hydrogen and voids in light-induced metastable defect formation in hydrogenated amorphous silicon: a model': **Phys. Rev. B**, vol. 65, 085206/1-9 (2002).
10. **D. Roy**, C. Longeaud and O. Saadane, 'Influence of light-soaking and annealing on the microstructure of a-Si:H deposited at 423K': **J. non-crystalline solids**, vol. 299-302, part 1, (2002) 511-515.
9. J.P. Kleider, M. Gauthier, C. Longeaud, **D. Roy**, O. Saadane and R. Brüggemann, 'Spectral photoresponses and transport properties of polymorphous silicon thin films': **Thin Solid Films**, vol. 188, 403-404 (2002).
8. **D. Roy**, C. Longeaud, O. Saadane, S. Vignoli, R Butté, R. Meaudre and M. Meaudre, 'Evolution with light-soaking of polymorphous materials prepared at 423K': **J. non-crystalline solid**, vol. 299-302, part 1, (2002) 482-486.
7. C. Longeaud and **D. Roy**, 'Is interstitial hydrogen playing a role in the Staebler-Wronski effect?': **Mat. Res. Soc. Symp. Proc., USA**, vol. 664 (2001), A14.4.
6. C. Longeaud, **D. Roy**, P. Choudhuri, N. Dutta Gupta, P. Pratim Ray S. Vignoli, M. Meaudre and R. Meaudre, 'Properties of silicon films deposited under Argon dilution': **Mat. Res. Soc. Symp. Proc., USA**, vol. 664 (2001), A23.1.
5. C. Longeaud, **D. Roy** and Z.T. Hangouan, 'Evolution with light-soaking of the conduction band tail of amorphous silicon like materials': **Applied Physics Lett.** vol. 77, no. 22 (2000) 3604-3606.
4. **D. Roy** and A. Nag, 'Field and frequency dependence of critical current density $\langle j \rangle$ of ceramic HTSCs': **Indian Journal of Physics A**, vol. 73A(2), 133-146 (1999).
3. B. Ghosh, **D. Roy**, C. Neogy, S.K. Deb and A. Nag, 'Optical spectra of $Y_{1-x}Pr_xBa_2Cu_3O_7$ ($0 < x < 1$); dependence of superconducting transition on degree of localization: **Solid State Commn.** vol. 102, no. 4 (1997) 311-315.

2. **D. Roy**, B. Ghosh, C. Neogy, S.K. Deb and A. Nag, 'Electrical study of 123 HTSC (77 to 400K) with varying fraction of Y; explanation of the normal state behaviour': **phys. Stat. Sol. (b)**, vol. 190 (1995) 511.
1. **D.Roy**, S.K. Deb, C. Neogy and A. Nag, 'Frequency dependent losses in $\text{REBa}_2\text{Cu}_3\text{O}_7$ (RE=Dy, Ce)': **phys. stat. sol.(b)**, vol. 183 (1994) 523.