# GOVERNMENT GENERAL DEGREE COLLEGE, SINGUR

## ACADEMIC PROFILE

**DR. ANJAN DAS**
Associate Professor in Physics (W.B.E.S.)
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- **Specialization:** Radio Physics and Electronics
- **Date of joining in this college:** 04.09.2020.
- **Total teaching experience in college level:** 18 years
- **Area of research:** Nanoscience
- **Title of Ph.D. thesis (if any):** PREPARATION AND CHARACTERIZATION OF SOME OXIDE SEMICONDUCTOR NANOPARTICLES
- **Research guidance (if any):** Nil
- **Research projects [completed / ongoing] (if any):** Nil
- **List of publications:**

### A. Published papers in Journals:

1. Das, Anjan; Mandal, Atis Chandra; Roy, Soma; Nambissan, PMG; 'Positron annihilation studies of defects and fine size effects in nanocrystalline nickel oxide'; Journal of Experimental Nanoscience; 108, 622-639,2015 Taylor & Francis
2. Das, Anjan; Mandal, Atis Chandra; Roy, Soma; Prashanth, Pendem; Ahamed, Sk Izaz; Kar, Subhrasmita; Prasad, Mithun S; Nambissan, PMG; 'Synthesis and characterization of magnesium oxide nanocrystallites and probing the vacancy-type defects through positron annihilation studies' Physica E: Low-dimensional Systems and Nanostructures, 8(3), 389-397, 2016, Elsevier
3. Das, Anjan; Mandal, Atis Chandra; Roy, Soma; Nambissan, PMG; 'Mn-Doping in NiO Nanoparticles: Defects-Modifications and Associated Effects Investigated Through Positron Annihilation Spectroscopy' Journal of Nanoscience and Nanotechnology, 16(4) 4153-4163,2016, American Scientific Publishers
4. Anjan, Das; Chandra, Mandal Atis; Nambissan, PMG; " Effect of size on momentum distribution of electrons around vacancies in NiO nanoparticles" Chinese Physics B 24(4), 46102, 2015, IOP Publishing
5. Das, A; Mandal, AC; Roy, S; Nambissan, PMG; 'Internal defect structure of calcium doped magnesium oxide nanoparticles studied by positron annihilation spectroscopy'; AIP Advances 8(9), 95013, 2018, AIP Publishing LLC
6. Das, Anjan; ' Positron annihilation spectroscopic studies of sintering effect on sol–gel-synthesized SiO2 wide band gap semiconductor nanocrystals' CURRENT SCIENCE, 117(12), 1990, 2019, INDIAN ACAD SCIENCES
7. Ali, Sk Irsad; Das, Anjan; Agrawal, Apoorva; Mukherjee, Shubharaj; Ahmed, Maudud; Nambissan, PMG; Mandal, Samiran; Mandal, Atis Chandra; 'Characterization, spectroscopic investigation of defects by positron annihilation, and possible application

of synthesized PbO nanoparticles', Chinese Physics B, 30(2), 26103, 2021, IOP Publishing

8. Ali, Sk Irsad; Dutta, Dhanadeep; Das, Anjan; Mandal, Samiran; Mandal, Atis Chandra; 'Understanding the structure-property correlation of tin oxide nanoparticles synthesized through the sol-gel technique', Journal of Luminescence, 253, 119465, 2023, Elsevier
9. Das, Anjan; 'Removal of defects in CdO nanoparticle and rapid synthesis of CdO nanoflake using novel microwave technique to improve semiconductor device performance', Indian J. Sci. Technol, 14(10), 8583868, 2021,

## B. Published papers in Seminars/Symposia/Conferences:

**[1] Defect-specific investigation of NiO nanoparticles through positron annihilation spectroscopy.**
**A. Das, A. C. Mandal, S. Roy and P. M. G. Nambissan, International conference on laser,**
**material science and communication, University of Burdwan, (December 7-9, 2011).**
**[2] Synthesis and Characterization of Oxide Semiconductor Nanoparticles. A. Das, A. C.**
**Mandal, S. Roy and P. M. G. Nambissan, First National Seminar on Recent Trends in Condensed**
**Matter Physics Including Laser Application, University of Burdwan, ( March 6-7, 2012).**
**[3] Size dependent Synthesis, Characterization and Positron Annihilation Studies of NiO**
**Nanoparticles. A. Das, A. C. Mandal, S. Roy and P. M. G. Nambissan, Second National Seminar**
**on Recent Trends in Condensed Matter Physics Including Laser Application, University of**
**Burdwan, ( March 22-23, 2012).**
**[4] Finite size effects in NiO nanoparticles. A. Das, A. C. Mandal, S. Roy and P. M. G.**
**Nambissan, Third National Seminar on Recent Trends in Condensed Matter Physics Including**
**Laser Application, University of Burdwan, ( March 5-7, 2013).**
**[5] Probing the defects by positron on Mn doped NiO nanoparticles, A. Das, A. C. Mandal,**
**National Seminar on Condensed Matter, Laser and Communication, University of Burdwan,**
**(February 27 - 28, 2015).**
**[6] Interior defect environment of calcium doped magnesium oxide nanoparticles. A. Das, A. C.**
**Mandal, National Seminar on Recent Trends in Condensed Matter Physics including Laser Applications, (March 8-9, 2017).**

**[7] Positron annihilation spectroscopic … nanoparticles. National seminar on recent trends in condensed matter physics including laser applications. January 16-18, 2019. University of Burdwan**

**[8] Nanomedicine, nanooptics, nanophotonics .... of Lead oxide nanoparticles. 2nd international conference on frontiers in biological, environmental and medical sciences.March 7-9, 2019. University of Burdwan.**

## C. Published Books / Chapters in Books:

Electron Momentum Distribution Around Vacancy Cluster in CdO Nanoparticles, 449-455, 2021 Springer Nature Singapore Pte Ltd ISBN: 978-981-15-7408-5