

Curriculum Vitae of Dr. Balasubramanian C

Current Position & Affiliation (Jan 2009 – till date)

Scientist – SD
Facilitation Centre for Industrial Plasma Technologies (FCIPT)
Institute for Plasma Research, Gandhinagar, INDIA

Address for Communication

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Current research activity & Interests

- Synthesis and study of titania nanoparticles for its self cleaning application in textiles
- Study of morphology and thermal stress driven magnetism of magnetic nanoparticles
- Study of local atomic structure of magnetic nanoparticles by x-ray fluorescence spectroscopy
- Synthesis and study of semiconductor (especially Group III nitride) and metal oxide nanomaterials

Research Experience

(a) After Ph.D (prior to the current position)

1. Visiting Faculty
Univ. of Tamkang/ NSRRC, Taiwan Oct. 2008 – Jan. 2009
2. Researcher
Laboratori Nazionali di Frascati, Italy Sept. 2006 – Sept. 2008
3. Researcher
University of Rome 2, Tor Vergata, Italy Sept. 2005 – Aug. 2006
4. INFN Post-doctoral Fellow
Laboratori Nazionali di Frascati, Italy Sept. 2003 – Aug. 2005

(b) During Ph.D

5. Research Associate
University of Pune, India Oct. 2001 – Aug. 2003

6. Junior Research Fellow on a research project funded by Dept. of Sci & Technol (Govt. of India) Mar. 1996 – Sept. 1996
7. Junior Research Fellowship on a research project funded by the Dept. of Atomic Energy (Govt. of India). Dec. 1996 – Sept. 2001
8. Research Associate on a research project funded by the Dept. of Atomic Energy (Govt. of India) Oct. 2001 – Aug. 2003

- **Total number of Research Publications in International Journal : 30**

Total number of **Project students** guided (Masters level – both within and outside India) for varying durations : **21**

Number of students currently registered for Ph.D : **01**

Hands-on Experience

- Experience in designing vacuum chambers for synthesis of nanomaterials by thermal plasma technique. Experience in handling various types of vacuum pumps and vacuum devices
- Has extensively used following analytical techniques including analysis and interpretation of data :
TEM, SEM, AFM, STM, XRD, FTIR, XPS, for characterization of nanomaterials.
- Atomic emission spectroscopy
- Development of a Numerical code (using FORTRAN) to simulate the gas phase specie concentration in a thermal arc plasma synthesis process

Awards/ Commendations

- 1989:** Was one of the fifteen students selected for a National Fellowship awarded by UGC (University Grants Commission, Govt. of India) for admission to Master's degree course in Physics at the University of Pune, India
- 2001:** Was awarded the *Umberto M Grasnava* Prize for the Best Student of the International School and Workshop on Nanotubes and Nanostructures 2001 held at Frascati, Italy.
- 2004 :** Our research publication on the synthesis of AlN Nanowires and nanoparticles in the International Journal "*Nanotechnology*" was rated as the top 100 popular papers in the year 2004
- 2010 :** **MRSI Prize** for the Best Poster for paper "*Thermal Plasma Process for Synthesis of Crystalline Nano-titania*" awarded during 21st AGM of MRSI held on 9th April 2010

Conferences/Symposiums/Workshops attended

No. of Conferences/ Workshops attended : 22

No. of Poster presentations : 11

No. of Oral presentations : 7

No. of Invites Talks/ Guest Lectures : 13

Educational Details

- Doctor of Philosophy (Ph.D) in Physics
University of Pune, Pune, INDIA
Year : Jan. 2003
- Master of Science (M.Sc.) in Physics
University of Pune, Pune, INDIA
Year : 1995
- Bachelor of Science (B.Sc) in Physics
University of Madras, Madras, INDIA
Year : 1989

Balasubramanian C