

Roshny S

Research Fellow,
Numerical Atmospheric Modelling Branch,
Space Physics Laboratory,
Vikram Sarabhai Space Centre,
Indian Space Research Organization,
Thiruvananthapuram - 695022
Kerala, India.
E-mail: roshni_s@vssc.gov.in, roshnyjagan@gmail.com
Institution website: <http://SPL.GOV.IN>
Phone: 8891828206



CURRENT RESEARCH INTERESTS

- Numerical Weather Prediction and Atmospheric Modelling
- Parametrization of Atmospheric Boundary layer and Convection Processes
- Data Assimilation in Numerical Weather Prediction Models
- Large Eddy Simulation

EDUCATION

- 2014-present** : Research Fellow, Space Physics Laboratory (SPL), VSSC, ISRO
- 2012-2014** : M.Tech.in Nanotechnology, Amrita Center for Nano sciences and Molecular Medicine, Kochi, Kerala, India. (CGPA9.79/10)
Thesis Title: *MnO₂ nano/micro hybrids for supercapacitors: “Nano’s Envy, Micro’s pride”*
- 2009-2011** : M.Sc. in Physics, Mahatma Gandhi University, Kerala, India
(Percentage of Marks obtained: 76.5%)
Thesis Title: *“Characterization of Ba_{0.5}Sr_{0.5}TiO₃ thin films grown by Pulsed Laser Deposition”* with Dr. M.K Jayaraj, Cochin University of Science and Technology (CUSAT), Cochin, Kerala.
- 2006-2009** : B.Sc. in Physics, Mahatma Gandhi University, Kerala. (Percentage of Marks obtained: 91.3%, Rank: 9th in the University)

SKILLS

- Familiar with Linux and Windows operating systems.
- Familiar with languages like Fortran 95, C++.
- Familiar with softwares like MATLAB.
- Familiar with sophisticated instrumentation like SEM, TEM, XRD, and UVS.

AWARDS AND ACHIEVEMENTS

- Recipient, MNRE (Ministry of New and Renewable Energy) Scholarship, India, 2012-2014
- M.Tech Thesis Abstract Titled “MnO₂ nano/micro hybrids for supercapacitors: ‘Nano’s Envy, Micro’s pride” selected in the top 100 abstracts for Poster Presentation at the 6th ICONSAT (International Conference on Nanoscience and Technology); Mohali, India; March 2014.
- Recipient, Junior Research Fellowship (JRF-2014) conducted by Space Physics Laboratory (SPL), Vikram Sarabhai Space Centre (VSSC), Indian Space Research Organization (ISRO), Department of Space (DOS), Govt. of India.

CONFERENCE PRESENTATIONS

1. *MnO₂ nano/micro hybrids for supercapacitors: ‘Nano’s Envy, Micro’s pride’*, **Roshny.S**, R. Ranjusha, M.S. Deepak, R. Sanoj, R. Jayakumar, S.V. Nair, A. Balakrishnan; 6th ICONSAT (International Conference on Nanoscience and Technology); March 2-5, 2014; Mohali, India.
2. *Plasma Waves in the ionospheres of Mars and Venus*, **Roshny S**, Vipin K. Yadav & Anil Bhardwaj; 4th PSSI (Plasma Science Society of India) – Plasma Scholar’s Colloquium (PSC-2015); August 6 – 7, 2015; Department of Physics, Jadavpur University, Kolkata.
3. *Two stream instability studies in a planetary atmosphere*, **Roshny S**, Vipin K. Yadav & Anil Bhardwaj; 19th National Space Science Symposium (NSSS-2016); February 9 – 12, 2016; Space Physics Laboratory (SPL), Vikram Sarabhai Space Centre (VSSC), Thiruvananthapuram, Kerala.

PUBLICATIONS

1. *Synthesis, characterization and rate capability performance of the micro-porous MnO₂ nanowires as cathode material in lithium batteries*, Ranjusha R , Sonia T. S , **Roshny S** , Lakshmi V , Sujith Kalluri , Taik Nam Kim ,Shantikumar V. Nair , A. Balakrishnan, *Materials Research Bulletin*, 2015, **DOI:** 10.1016/j.materresbull.2015.04.012
2. *MnO₂ nano/micro hybrids for supercapacitors: "Nano's Envy, Micro's pride"*, **S Roshny**, R Ranjusha., M.S.Deepak, R.Sanoj, R.Jayakumar, S.V.Nair, A. Balakrishnan. *RSC Advances*, 2014.**DOI:** 10.1039/C4RA00935E
3. *Supercapacitors based on freeze dried MnO₂ embedded PEDOT: PSS hybrid sponges*,R. Ranjusha, K.M. Sajesh, **S. Roshny**, V. Lakshmi, P. Anjali, T.S. Sonia, A. Sreekumaran Nair, K.R.V. Subramanian, Shantikumar V. Nair, K.P. Chennazhi, A. Balakrishnan, *Microporous and Mesoporous Materials* 2014,**DOI:** 10.1016/j.micromeso.2013.11.035
4. *Nano/micro-hybrid NiS cathodes for lithium ion batteries*, T.S. Sonia, P. Anjali, **S. Roshny**, V. Lakshmi, R. Ranjusha, K.R.V. Subramanian, Shantikumar V. Nair, Avinash Balakrishnan, *Ceramics International*, 2014, **DOI:** 10.1016/j.ceramint.2014.01.041
5. *Lithium-ion storage performance of camphoric carbon wrapped NiSnano/micro-hybrids*, Sonia Theresa Sebastian, **Roshny Sirijagan**, RanjushaRajagopalan, Anjali Paravannoor, Lakshmi V. Menon, Shantikumar V. Nair, AvinashBalakrishnan, *RSC Advances*,2014**DOI:** 10.1039/C4RA00176A
6. **Book chapter:** *Chapter 5, Nanostructured Metal Oxides for Supercapacitor Applications*,P.Ragupathy, RanjushaR, and **Roshny S**, *Nano Structured Ceramic Oxides for Supercapacitor Applications*, CRC press, Taylor and Francis group, 2014

REFERENCES

1. Dr. Radhika Ramachandran

Director, Space Physics Laboratory,
Head, Numerical Atmosphere Modelling,
Vikram Sarabhai Space Centre,
Department of Space, Government of India,
Indian Space Research Organisation, ISRO PO,
website: <http://spl.gov.in>
E-Mail: radhika_ramachandran@vssc.gov.in, radhikaspl@gmail.com

2. Dr. D. Bala Subrahmanyam

Scientist/Engineer 'SF',
Space Physics Laboratory, Vikram Sarabhai Space Centre
Department of Space, Government of India
Indian Space Research Organisation, ISRO PO
Thiruvananthapuram - 695022, India; Fax: +91-471-2706535;
Phone: +91-9895656150 (M); +91-471-2562155 (O); +91-471-2917215 (R)
E-mails: subrahmanyam@gmail.com; db_subrahmanyam@vssc.gov.in
Homepage: <http://SUBRAHAMANYAM.weebly.com/>