

Dr. Pooja Devi

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L-34, Residential Colony, Giani Zail Singh Engineering College, Bathinda 151001, India.

TEACHING EXPERIENCE

Assistant Professor

[1] Guru Nanak Dev University, Amritsar, India | July 2015 – May 2016

[2] Maharaja Ranjit Singh Punjab Technical University, Bathinda, India | August 2016 – Till date

Responsibilities:

- Teaching undergraduate and postgraduate classes.
- Designed courses and conducted examinations of postgraduate and engineering classes.
- Conduct research and publishing papers in academic journals
- Peer mentored eight M.Sc. students for their dissertation work.
- Assisting with various departmental duties to support other faculty members.
- Represent the Department at National/International conferences

RESEARCH PUBLICATIONS

Total publications: 10

Selected publications

- Purushothaman P., Rao M.S., Kumar B., Rawat Y., Krishan G., **Devi P.**, "Comparison of two methods for ground level vapor sampling and influence of meteorological parameters on its stable isotopic composition at Roorkee, India." *Hydrological Processes* 2012, 28(3), 882-894.
- **Devi P.**, Jain A.K., Rao M.S., Kumar B., "Experimental study on isotopic fractionation of evaporating water of different initial isotopic composition." *Journal of Radioanalytical and Nuclear Chemistry* 2014, 302, 975-978.
- **Devi P.**, Jain A.K., Rao M.S., Kumar B., "Isotopic composition of atmospheric moisture from pan water evaporation measurements." *Isotopes in Environmental Health Studies* 2015, 51(3), 426-438.
- **Devi P.**, Saini R., Singh R., Mahajan A., Bedi R.K., Aswal D.K., Debnath A.K., "Zinc phthalocyanine nanowires based flexible sensor for room temperature Cl₂ detection," *AIP Conference Proceedings* 2018, 1942, 050084.
- **Devi P.**, Singh R., Sharma S., Sharma S., Mahajan A., Bedi R.K., Saini R., "Flexible and highly sensitive Cl₂ sensor based on solution-processed phthalocyanine nanowires," *AIP Conference Proceedings* 2019, 2115, 030311.
- **Pooja Devi**, A.K. Jain, M.S. Rao, and Rajan Saini "Isotopic Fractionation in Atmospheric Water Vapour at 0°C" *Curr. Rep. Sci. & Tech.* 3 (2017) 1-8 (ISSN: 2455-023X).
- **Pooja Devi**, Rajan Saini, Kamalpreet Khun Khun, Iqbal Singh, Gursharan Kaur, Taminder Singh, Rajinder Singh and R.K. Bedi "Self-assembled Zinc Phthalocyanine based Nanostructures for Gas Sensing Application" *Curr. Rep. Sci. & Tech.* 3 (2017) 113-120. (ISSN : 2455-023X)
- **Pooja Devi**, A.K. Jain, M.S. Rao and B. Kumar, "Stable Oxygen Isotopes as Tool to Investigate the Temperature and Salinity Induced Water Mixing" *Curr. Rep. Sci. & Tech.* 2 (1) (2016) 121-127. *Current Reports on Science and Technology* (ISSN : 2455-023X)
- R. Saini, **Pooja Devi**, I. Singh, G. Kaur and R. K. Bedi, "Preparation and Characterization of Organic Nanofibers" *Curr. Rep. Sci. & Tech.* 2 (1) (2016) 128-134.

- Saini R., **Devi P.**, Kaur R., Sharma S., "Tailoring the Performance of Phthalocyanine-Based Sensor: Side Chain Substitution and Nanofabrication" AIP Conference Proceedings (MATPR-D-23-01839, In review process)

BOOK CHAPTERS

- Saini R., **Devi P.**, "Nanosensors for detecting nutrient losses from soil (as gaseous ammonia and nitrous oxide, or/and soil leachates as nitrate and phosphate)," in Nanosensors for Smart and Sustainable Agriculture (ISBN: 9780323852937), Editors: Nguyen, T., Rajendran, S., DENIZLI, A., Yasin, G., Kumar, A., Publisher: Elsevier Science. (Publication date: December 31, 2021).
- Saini R., **Devi P.**, "Room temperature gas sensing properties of metal oxide nanowires/graphene hybrid structure" in One Dimensional Semiconducting Hybrid Nanostructures: Gas Sensing and Optoelectronic Applications, Editors: Aswal D.K., Joshi N., Kumar A., Publisher: Wiley-VCH, Germany.
- **Devi P.**, Saini R., Gasso S., Sharma S., "MXene based nanomaterials for gas sensing applications" in MXENE-BASED HYBRID NANO-ARCHITECTURES: FROM DESIGN TO APPLICATIONS" - ISBN: 9780323955157, Publishers: Elsevier Science (In progress)

CONFERENCE PRESENTATIONS

- **Devi P.**, Singh R., Sharma S., Sharma S., Mahajan A., Bedi R.K., Saini R., "Flexible and highly sensitive Cl₂ sensor based on solution-processed phthalocyanine nanowires," AIP Conference Proceedings 2019, 2115, 030311.
- **Devi P.**, Saini R., Singh R., Mahajan A., Bedi R.K., Aswal D.K., Debnath A.K., "Zinc phthalocyanine nanowires based flexible sensor for room temperature Cl₂ detection," AIP Conference Proceedings 2018, 1942, 050084.
- **Devi P.**, Jain A.K., Rao M.S., Kumar B., "Experimental study on isotopic fractionation of evaporating water of different initial isotopic composition." In 3rd international conference on applications of radiotracers and energetic beams in science at Saha Institute of Nuclear Physics, Kolkata, India during January 12-18, 2014.
- **Devi P.**, Jain A.K., Rao M.S., Kumar B., "Comparison of direct and pan-derived isotopic composition of atmospheric moisture at Roorkee, India" In international conference on water, wastewater and isotope hydrology organized by UVEC, Bangalore University, India during July 25-27, 2013.
- Pooja Devi, A.K. Jain, M.S. Rao and B. Kumar "Experimental study on isotope fractionation of evaporating water of different initial isotopic composition", 3rd international conference on Applications of Radiotracers and Energetic Beams in Science, organized by Saha Institute of Nuclear Physics Kolkata, India, Jan 12 to 18, 2014.
- Delivered talk on "Dynamical Study of Atmospheric Moisture using Stable Isotopic Techniques" at Department of Physics, I.I.T Roorkee on 2nd August, 2013.
- Pooja Devi, M.S. Rao, Bhishm Kumar and A.K. Jain "Comparison of direct and pan-derived isotopic composition of atmospheric moisture at Roorkee, India", International conference on Water, wastewater and isotope hydrology organized UVCE, Bangalore University, India, July 25 to 27, 2013.
- Pooja Devi, M.S. Rao, A.K. Jain and B. Kumar "Investigation of Temperature and Salinity induced Water Mixing using Oxygen Isotopes", National seminar on Applications of Isotopes and Radiation Technology for Societal Benefits, Bangalore University, June 21 to 23, 2012.

- Pooja Devi, A.K. Jain and M.S. Rao “Isotopic Enrichment of Water during Evaporation under Reducing and Constant Volume Conditions”, National Conference on Advances in Physics organized by Indian Institute of Technology, Roorkee, India, Feb 25 to 26, 2012.
- Pooja Devi, M.S. Rao, B. Kumar and A.K. Jain “Recent Developments in Isotope Ratio Mass Spectrometry”, 4th Conference on Recent Trends in Instrumental Methods of Analysis organized by Indian Institute of Technology, Roorkee, India, Feb 18 to 20, 2011.
- **PhD Students enrolled:** 01, Ms. Harmanpreet Kaur
- **Topic:** MXene based materials for gas sensing applications

EDUCATION

Doctor of Philosophy: Physics

Department of Physics, Indian Institute of Technology, Roorkee, India | May 2015

Thesis title: A Study of Atmospheric Moisture and Water Mixing using Stable Isotopic Techniques.

Thesis advisor: Prof. A.K. Jain

Master of Science: Physics (Hons. School) (Marks scored: 62.18%)

Department of Physics, Guru Nanak Dev University, Amritsar, India | May 2008

Dissertation title: Fabrication of phthalocyanine thin films by thermal evaporation technique

Dissertation Advisor: Prof. R.K. Bedi

Bachelor of Science: Physics (Hons. School) (Marks scored: 58.05%)

Department of Physics, Guru Nanak Dev University, Amritsar, India | May 2006

Bachelor of Education (B.Ed): Math and Science (Marks scored: 61.09%)

Aman Bhalla College of Education, Pathankot, India | April 2009

National Level Examinations Qualified: CSIR-NET 2016 and GATE-2009