Divya Rehani

Mobile: + 919410238442; +918377889585

E-Mail: divyarehani@gmail.com ;
divyanplindia@gmail.com

RESEARCH AND DEVELOPMENT ENGINEER IN RAMAKRISHNAN DESIGN HOUSE

A principal executor and developer of 'motor controller' for proper function of BLDC Motors used for e-cycle, Fan, Drone, Refrigerator, air-purifier etc. that appropriate strategies and software's are handled and are tuned to act according to the priorities.

AN OVERVIEW

A multi-faceted professional with over 11+ years of extensive experience in the areas of Research & Development, Project Management, Maintenance, Development of new magnetic materials for device detection and heavy metal removal in water applications and Team Management majorly in research project. Imparting Training and Guidance to all Jr. research fellow joining for organization. A keen planner & implementer with expertise in managing entire end to end operational activities with key focus on top-line & bottom- line profitability by ensuring optimal utilization of resources. Skills in handling activities involving resource planning, in-process inspection, team building and co-ordination with internal / external departments. Talent for conducting out various tests & inspections to ensure that systems are in compliance with pre-set technical specifications; proficient in detecting defects / faults and taking corrective actions. Effective communicator & negotiator with strong analytical, problem solving & organizational abilities.

Special Mentions:

Earned and Worked as Senior Research Fellow at CSIR –NPL to administer the development of Magneto - Opto - Electronic material and Magnetic Quantum dots for Biomedical Applications

~~~~

Successful in managing technical & commercial aspects, Resource planning & optimization. Documentation of scientific papers and Publications.

Core-functional competencies include:

- Strategic Planning
- Project Management
- Cost / Resource Optimization
- Team Management/Training
- Coordination & Liaison
- Techno-commercial Operations
- P&L Accountability.
- Business Process Reengineering
- Auditing / Compliance.

CAREER CONTOUR

Jun 2022 – till to-date: Rama Krishna Design House New Delhi.

R & D Engineer – Motor Control

Key Result Areas:

Holds responsibility as Senior Researcher and working upon many motors such as Fan, E-Cycle, Drone, refrigerator, Air-purifier, etc. for smooth running and tuning of motor using motor specification in ST Micro corporation Workbench and Motor Pilot in collaboration with ST micro-electronics in ST Augmented lab established in R K Group at wazipur industrial area, New Delhi.

- Learned about various working environments, IDE, debugging software's. Developed and reviewed many functions such as speed and torque control for efficiently functioning of motor is main objective and challenge.
- Worked upon the coding and developed programs using C Language for the preparation of project, as per the requirement of obtaining management approvals. Actively delivered weekly project updates.
~~~~

Nov'15–Apr'22: Council of Scientific & Industrial Research (CSIR)-NPL, New Delhi.

Senior Researcher

Key Result Areas:

Shouldered responsibilities as Senior Researcher and worked upon colloidal nanoparticles and semiconductor metal oxides synthesis such as ZnO, TiO_2, Fe_3O_4 by hot-injection, sol-gel, auto-clave for water remediation, adulterant removal in food industries and detection of cancerous cells and drug delivery in Photonic Materials Metrology Department, Advanced Materials and Devices Metrology Division, CSIR-National Physical Laboratory, New Delhi.

- Identified areas of concern and taking corrective and preventing actions and suggesting viable solutions; efficiently analyzed functions including identification of key trends and challenges.
- Developed contracting strategies entailing preparation of project reports, obtaining management approvals.
- Successful in performing quality inspection; also actively participated in weekly meetings to evaluate project progress and implement effective remedial measures based on identified deviations
- Instrumental in ensuring material availability and mobilization.

May'13-May '14: National Physical Laboratory (NPL), New Delhi.

Senior Researcher

Key Result Areas:

Monitored overall project on "Research Initiative on Nano Devices and Nano Sensors"- Hall Effect (HE), Anomalous HE, Spin HE, etc., on FeSi (Electrical Steel) thin Film sandwiched between Indium tin oxide (ITO) and Platinum via physical vapour deposition technique (thermal evaporation) or sputtered by ions which are generated by a plasma discharge usually within an inert gas (argon).

Jan'12-Aug '12: Department of Physics, Lucknow University.

Senior Researcher

Key Result Areas:

"Interaction of laser beams with Quantum Plasma: Parametric Instabilities"-worked on fourth state of matter composition, confinement and stabilities issues. It was a theoretical project work dealing with formulations of Maxwell's equations.

Aug '09- Dec '11: Teerthankar Mahaveer University Moradabad U.P.

Senior Lecturer

Key Result Areas: Teaching Physics and its application in Industry to B.Tech. & M.Tech. and B.Sc. & M.Sc. Students.

- Conducted conferences, workshops, seminars for faculty and the students.
- Initiated and supervised new projects for Students.
- Organized sports and other cultural activities.
- Lead Coordinator for Managing Faculty Interactive and curriculum development sessions.

Jul '08- Jun '09: Laboratory at IIT Delhi.

Research Scholar

Key Result Areas: worked on "Magnetic Thin Films" – FePd, FePt by chemical deposition technique (electro-deposition) using chemical bath in Magnetics & Advanced Ceramics Lab.

SCHOLASTICS

Ph.D. - Applied Physics from Dr. A.P.J Abdul Kalam Technical University, Lucknow.	Viva
M.Tech. - Nano Sc. &Tech. from Guru Jambheshwar University of Science & Technology, Hissar – Haryana.	2009
M.Sc. - Physics from M.J.P. Rohilkhand University, Bareilly.	2007
B.Sc. - Physics from M.J.P. Rohilkhand University, Bareilly.	2005

Other Scholastics:

- **Ph.D.** Thesis Submitted on: "**Structural and Magneto-Optical Studies of Transition/Rare-Earth Metal Doped Semiconductor Metal Oxides**
- **M.Tech.** Research Scholar IIT Delhi -Dissertation Title "**Magnetic Thin Films "**
- **Research Publications (12 nos.):** Will be shared separately
- Initiative on Research of Nano Devices and Nano Sensors.
- Lead research on Colloidal & Semiconductor nanoparticles.
- Interaction of laser beams with Quantum Plasma: Parametric Instabilities RO Membrane Maintenance.

PERSONAL SNIPPETS

Date of Birth:	11th February, 1984
Address:	BH-447(East), Shalimar Bagh, New Delhi
Nationality:	Indian
Marital Status:	Married
Gender:	Female
Languages Known:	English & Hindi
References:	Will be provided when asked for

List of Publications till to-date

S No	Title	D.O.I & S.C.I-Scopus	Authors	Journal/ Conference
1.	"Room Temperature Optical and Magnetic properties in 3% Fe doped ZnO"	Poster Presentation	***Divya Rehani***, Swati Bishnoi, Manish Saxena and Shailesh Narain Sharma	**Conference**: 17-19 January 2019 International conference on physics, society and technology-2019 (ICPST-2019) New Delhi.
2.	"Magneto-Opto Electronic Applications of Conductive and Room Temperature Ferromagnetic (Al, Mn) co-doped ZnO particles with visible emission"	10.1166/jnn.2020.17497 S.C.I with ISSN No.:1533-4880 E-ISSN No.-1533-4899	***Divya Rehani***, Swati Bishnoi, Manish Saxena and Shailesh Narain Sharma	American Scientific Publishers – Journal of Nanoscience and Nanotechnology ISSN: 1533-4880 (Print); EISSN: 1533-4899 **I.F-1.35**
3.	"Amendment of the Structural and Optical Properties of Solution Route Processed TiO_2 Nanoparticles by Rare-Earth Europium"	STM Journals -eISSN: 0973-418x Journal DOI no.: 10.37591/NTs	Sonali Mehra, ***Divya Rehani,*** Swati Bishnoi, A. Srivastava, Shailesh Narain Sharma	Nano Trends: A Journal of Nanotechnology and Its Applications (NSTC-2018) Volume 20, Issue 3, ISSN: 0973-418X (Online)
4.	"Adverse Effect of Europium doping on Magneto-Optical Properties of Cr_2O_3"	https://doi.org/10.1166/asem.2020.2511 Scopus with ISSN No.: 2164-6627	***Divya Rehani,*** Swati Bishnoi, Manish Saxena and Shailesh Narain Sharma	Advanced Science Letters-Journal of Advanced Science, Engineering and Medicine, Volume 12, Number 1, January 2020, pp. 36-39(4) ***I.F-1.25***
5.	"Study of Room Temperature Ferromagnetic Behavior in Cr Doped TiO_2 Nanoparticles"	Poster Presentation	Jyoti Bansal, ***Divya Rehani,*** A.K.Hafiz, Manish Saxena and Shailesh Narain Sharma	**Conference:** 6-7 Mar 2019 ICAM 2019 Centre for Nanoscience & Nanotechnology (CNN) Jamia Millia Islamia (A Central University) New Delhi, India
6.	"Spectral investigations of less explored rod-shaped green emitting $Ba_2SiO4:Tb^{3+}$ phosphors for LED and Photovoltaic applications"	10.1016/j.ijleo.2019.164015 S.C.I with ISSN No.: 0030-4026	Swati Bishnoi, Naina Lohia, ***Divya Rehani,*** Sonali Mehra, R. Datt, Govind Gupta, D. Haranath, Shailesh Sharma	*Optik- Elsevier-* ***I.F-2.84***
7.	"Synthesized Zinc Oxide Nano Rods and Flowers Studies for Optical, Di-electrical and Photocatalytic Applications"	10.1016/j.ijleo.2019.164154 S.C.I with ISSN No.: 0030-4026	Hemant Kumar Verma, ***Divya Rehani***, Shailesh Narain Sharma, K. K. Maurya	*Optik- Elsevier-* ***I.F-2.84***
8.	"Optimized Fe-doped ZnO nanoparticles for magneto-opto device applications"	10.1016/j.matpr.2020.02.090 S.C.I with ISSN No.: 2214-7853	***Divya Rehani***, Swati Bishnoi, Manish Saxena and Shailesh Narain Sharma	Materials Today: Proceedings Online publication complete: 29-FEB-2020 Volume 32, Part 3, 2020, Pages 417-421- ***I.F- 1.46***
9.	"Efficient luminomagnetic and conductive Eu and Dy doped ZnO phosphors for multifunctional devices"	10.1016/j.jpcs.2020.109460 S.C.I with ISSN No.: 0022-3697	***Divya Rehani,*** Swati Bishnoi, Manish Saxena, D.Haranath, Vinay Gupta, Shailesh Narain Sharma	Journal of Physics and Chemistry of Solids Volume 143, August 2020, 109460 ***I.F- 3.995***
10.	"Synthesis and Characterization of Temperature Controlled SnO_2 Nanoparticles by Solid-state Reaction Method"	10.21272/jnep.12(4).04004 Scopus with ISSN No.: 2077-6772	Vijay Garg, Harsh Sharma, ***Divya Rehani*** , Shailesh Narain Sharma, Manish Saxena	Journal of Nano- and Electronic Physics Vol. 12 No 4, 04004(6pp) (2020) ***I.F- 0.676***
11.	"Magnetic Impurity in Optically Active SnO_2 Nanoparticles"	Oral Presentation	***Divya Rehani***, Manish Saxena and Shailesh Narain Sharma	**Conference** -30 Sep -2020 Nanoconnect1.0: Environment energy & water (NSTC-2020)

12.	"3% Fe_2O_3: Cr_2O_3 - An excellent Magneto-Opto-Electrically Active Nanomaterial"	https://doi.org/10.1007/s00339-020-04255-1 SCI with EISSN-1432-0630-Print ISSN- 0947-8396	***Divya Rehani,*** Manish Saxena, S Dhakate & Shailesh Sharma	Springer Journal - Applied Physics A ***I.F- 2.983***
13.	"3% Eu: TiO2 magneto-electro-optically active nanoparticles"	Oral Presentation	***Divya Rehani,*** Mona Bhatnagar, Manish Saxena and Shailesh Narain Sharma	Conference -Dec 26-27, 2020 International Conference on Recent advancement in Applied Science and Engineering (ICRASE-2020)
14.	"Comparison of Co-operative Down-Conversion Luminescence in Pr3+, Yb3+ doped CaF2 & SrF2"	10.1016/j.ijleo.2021.166814 S.C.I with ISSN No.: 0030-4026	Swati Bishnoi , ***Divya Rehani,*** Naina Lohia, Manisha Tanwar Lalit Goswami Govind Gupta and Shailesh Narain Sharma	Optik- Elsevier- Volume 240, August 2021, 166814 I.F-2.84
15.	"Transition Metal and Rare Earth Metal Doping in SnO2 Nanoparticles"	accepted 15-Jun-2022 10.1007/s10948-022-06283-9	***Divya Rehani,*** Manish Saxena, Pratima R. Solanki, Shailesh Narain Sharma	Journal of Superconductivity and Novel Magnetism (manuscript number, #JOSC-D-22-00179R2) I.F- 1.675
16.	"Iron Phosphide Nano-fibers for Heavy Metal Removal"	Oral Presentation	***Divya Rehani,*** and Shailesh Narain Sharma,	- Two Days International e-Conference organized by Department of Chemistry, Deshbandhu College, University of Delhi. on Recent Advancements in Chemical Sciences: Health, Environment and Society (ICRACS - 2022) 8th & 9th April, 2022
17.	"Role of Eu and Fe in TiO2 for Magneto-Opto-Electronic Applications"	accepted 03-Aug-2022 10.1007/s00339-022-05830-4 SCI with EISSN-1432-0630-Print ISSN- 0947-8396	***Divya Rehani,*** Manish Saxena, M. Balal, S.R. Barman, Sanjay R. Dhakate, and Shailesh Narain Sharma	Applied Physics A, (manuscript number, APYA-D-22-01546) I.F- 2.983
18.	"Iron Doped Titania for Magneto-Opto-Electronic Device Applications"	accepted 21-Feb-2023 10.1007/s11664-023-10281-5	***Divya Rehani,*** Manish Saxena, Sanjay R. Dhakate, and Shailesh Narain Sharma	Journal of Electronic Materials I.F-2.047