**LOVELY SINGH **

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**E-Mail:** [lovelyranjta@gmail.com](mailto:lovelyranjta@gmail.com), [lovelyranjta@yahoo.co.uk](mailto:lovelyranjta@yahoo.co.uk)

**Area of Interest: Material Science (Nanocomposite Gel Polymer Electrolytes), Fiber Bragg Grating Sensors and Optical Amplifiers**

***Professional with 9 years of experience***

Skills in synthesis, characterization and exploration of nanoparticles, operating & handling lectrochemical Analyser CH Instruments, X-ray Diffractometer (XRD), Scanning Electron Microscopy (SEM), Differential Scanning Calorimetry (DSC), Fourier Transmission Infra-red Spectroscopy (FTIR), Optical Microscope (OM) and fibre optic devices, fibre designs and applications; ensured up-to-date knowledge on technology; excellent time management skills; excellent organizational skills; proficient on various design software (Origin, Optiwave) applications

**PROFILE SUMMARY**

* **Ph.D. (pursuing) in Physics on the topic “Studies on nanotubes embedded nano composite polymer electrolyte membrane for various device applications” from Deptt. of Physics, AKS University, Satna (M.P.)** and aprofessionalwith **7 years** of experience in teaching and **2 years** exp. in corporate sector.
* Presented research papers in various international/national conferences.
* Research papers published in reputed international journals.
* Delivered many motivational lectures.
* Excellent hands-on experience in different characterization instruments, Fibre Optics instruments & Optical Communication kits.
* Excellent professional track record for positions assigned.
* Possess knowledge in **Nanomaterials**, **Nanocomposite Polymer Gel Electrolytes, Fibre Optics & Optical Amplifiers**
* Demonstrated skills in **managing technical projects** through all phases to completion.
* Superb background in process improvement and synthesis of nanocomposite polymer gel electrolytes, design for applications.
* Possess strong communication and interpersonal skills.

**ORGANISATIONAL EXPERIENCE**

**Feb’09-Feb’11: Advanced Micronic Devices Ltd. (AMDL), New Delhi as Application Engineer**

**Jul’11-Sept’12: Vindhya Institute of Technology & Science, Satna (M.P.)**

**Aug’16- Currently : Asstt. Professor, Deptt. Of Physics, AKS University, Satna (M.P.)**

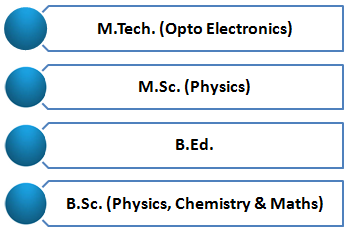
**Expertise in Origin & Optiwave Software (All modules) and various research characterization instruments**

**TECHNICAL SUBJECTS**

* Polymer Electrolytes
* Nanomaterials
* Synthesis of Nanocomposite Gel polymer electrolytes
* Solution Cast Technique
* Optical Communication and Measurements
* Analog and Digital Communication
* Fibre Optics and Non Linear Optics
* Laser Physics
* Laser Applications
* Applied Optics
* Optical Networks
* Integrated Optics

**EDUCATION**

**Scored first division throughout in studies**



2019 Ph.D. (Pursuing) in Physics from Deptt. of Physics, AKS University, Satna (M.P.)

2008 **M.Tech. (Opto Electronics)** from Shri G.S. Institute of Technology &

Science, Indore; scored 75.14% marks & Ist division with distinction

Specialisation: Optical Communication

2006 **M.Sc. (Physics)** from Devi Ahilya Vishwavidyalaya, Indore (M.P.)

2004 **B.Ed.** from Himachal Pradesh University, Shimla (H.P.)

2003 **B.Sc. (Physics, Chemistry & Maths)** from Himachal Pradesh University,

Shimla (H.P.)

2000 **H.S.C**. from H.P. Board of School Education, Dharamshala

1998 **S.S.C.** from H.P. Board of School Education, Dharamshala

***Academic Accolades:***

* Attended many national/international conferences
* Delivered expert lectures in various govt. colleges in the field of science
* Won no. of certificates during B.Ed. Course in 2004
* Earned Scholarship in Graduation during 2000- 2003 tenure
* Received Certificate of the National Scholarship Scheme in 10th Standard in 1998

**RESEARCH WORK (Ph.D.) in Physics**

**Title : Studies on nanotubes embedded nano composite polymer electrolyte membrane for various device applications” from Deptt. of Physics, AKS University, Satna (M.P.)**

**University : Deptt. of Physics, AKS University, Satna (M.P.)**

**Period : Pursuing since 2019**

**ACADEMIC PROJECT (M.Tech. Optoelectronics)**

**Title : Study of Fibre Bragg Grating (FBG) based Sensors for Strain and Pressure Measurements**

**Organisation : Central Scientific Instruments Organisation, Chandigarh**

**Period : May’07- Jun’08**

**Synopsis : Fibre optic sensor technology**; Fabrication, writing and designing of Fiber Bragg Grating and its sensor applications.

**MEMBERSHIPS**

* Ex-IEEE Member
* Ex-IEEE Communications Society Member

**RESEARCH PUBLICATIONS/PROFESSIONAL ENHANCEMENT PROGRAMS**

***Conference Attended:***

* **Paper presentation in International conference on Materials Science & Mathematics for advanced technology (MSMAT-2021) on the topic *"Experimental Investigations on Nano-ferrite Embedded Nanocomposite Polymer Electrolytes for Proton-conducting Rechargeable Batteries Application”* at NITTE, Karnataka from Nov 19-20, 2021. Published in Materials today: Proceedings, Nov 2021.**
* **Paper presented in National Conference in Materials and Devices (NCMD 2021) on the topic *“Ion Transport behaviour in Nanotube Embedded Nanocomposite Polymer Electrolyte Membranes for Ionic Devices :[(PVA-NH4CH3COO):MWCNT] system”* at Teerthanker Mahaveer University, Moradabad from Sept 16-17, 2021. Paper accepted in Macromolecular Symposia.**
* **Paper presentation in International Conference on Materials-Properties, Measurements and Applications (ICMPMA 2022) on the topic *"Structural and electrical properties of Al2O3 nanoparticle soaked nanocomposite gel polymer electrolyte for device applications”* at Fatima Mata National College, Kollam, Kerala from May 9-13, 2022.**
* **Paper accepted by American Journal of Nano Research entitled as “*Structural, Thermal and electrical studies of Al2O3 nanoparticle soaked electrolyte gel films for novel proton conducting (H+ ion ) eco-friendly device applications.*”**
* **Poster presented in the conference on Astronomy under Madhya Pradesh Vigyan Sammelan & Expo 2021 on the topic *“Experimental Studies on Sol-Gel Derived Ni Doped BiNiFeO3 Nanoparticle For Electrochemical Applications”*** **organised by IIT Indore, MPCST and Vigyan Bharti at IIT Indore from Dec 22-25, 2021.**
* **Attended national webinar on “Solar Modulation of Cosmic Rays” organised by Govt. Model Science College, Rewa sponsored by Deptt. of Higher Education, RUSA & World Bank Scheme-MPHEQIP on Sept 25, 2021**
* **Represented AKS University, Satna at 13th International Conference on Fibre Optics & Photonics-Photonics 2016 at IIT Kanpur, from Dec 04-08, 2016**
* **Represented AMDL, New Delhi at 10th International Conference on Fibre Optics & Photonics-Photonics 2010 at IIT Guwahati, Assam from Dec 11-15, 2010**
* **Allocaded with many awards/certificates at university level.**

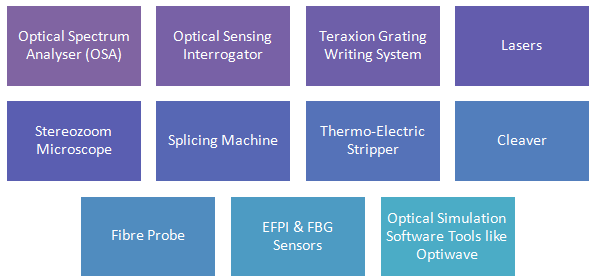
***Seminars Delivered:***

* Nanotechnology: Materials & Applications in AKSU, Satna in Oct 2021
* Fibre Bragg Grating (FBG) based Sensors for Strain and Pressure Measurements at SGSITS, Indore in 2008
* Optical Amplifiers at SGSITS, Indore in 2007
* Optiwave at Indian Air Force Station, New Delhi
* ISTE sponsored STTP on Advances in Coding and Communication; Algorithms and Systems at Nagpur, MS
* Integrated Test Range, Balasore- A DRDO Lab
* National Institute of Technology, Hamirpur & Srinagar, etc.

***Workshop Attended:***

* Workshop at 13th International Conference on Fibre Optics & Photonics-Photonics 2016 at IIT Kanpur, from Dec 04-08, 2016
* National Workshop on Recent Trends in Nanotechnology RTN-2007 organised by SGSITS under TEQIP in Indore
* Participation and guidance of students of AKS University at IISER Bhopal in Technical fest.
* Workshop for Latex Software organised by Deptt. Of Mathematics, AKS University, Satna

**LAB EQUIPMENT PURVIEW**

* **FTIR**
* **XRD**
* **SEM**
* **OM**
* **Electrochemical Analyser**
* **Optical Spectrum Analyser (OSA)**
* **Optical Sensing Interrogator**
* **Teraxion Grating Writing System**
* **Lasers**
* **Stereozoom Microscope**
* **Splicing Machine**
* **Thermo-Electric Stripper**
* **Cleaver**
* **Fibre Probe**
* **EFPI & FBG Sensors**
* **ORIGIN**
* **Optical Simulation Software Tool (Optiwave)**

**CERTIFICATION**

* Certificate of Proficiency in Airlines Management from Institute of Tourism & Future Management Trends (ITFT), Chandigarh

**PERSONAL DETAILS**

Date of Birth : 14th April 1983

Languages Known : English & Hindi

Address : HIG-62, Hinauta House, Bharhut Nagar, Satna - 485001 (M.P.) INDIA

Marital Status : Married

Nationality : Indian

Passport : Valid