

Curriculum Vitae

Present Address:

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Gujarat, India.
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Dr. Maitreyee Saha

Career Summary:

- ⇒ 10+ years of research experience along with **PhD in Chemical Engineering**
- ⇒ Currently working as “**R&D Scientist**” at Sahajanand Laser Technology Limited (SLTL), Gandhinagar, Gujarat since June 2016
- ⇒ Have rich experience in **Greenfield facility establishment** including state-of-the-art pilot **MCVD plant and fiber draw tower** as well as development of CVD systems
- ⇒ Currently **leading five R&D projects** based on innovative application of laser material interaction and radiant energy transfer
- ⇒ Idea transfer for three different commercial grade products
- ⇒ Optimized and demonstrated **Vapor Phase Doping Technology** for fabrication of rare earth doped optical fiber through MCVD process
- ⇒ Excellent problem solving skills based on in-depth scientific knowledge, diversified R&D experience and unprecedented analytical capabilities
- ⇒ Competent in **Project Proposal and Project Planning**
- ⇒ Excellent experience in **Technical Content Development & IP Management**

Area of Specialization:

- ❖ Chemical Engineering
- ❖ Material Science
- ❖ Optics
- ❖ Industrial Safety

Credentials:

- ❖ Granted International Patents → 6 No.s
- ❖ SCI Journal Papers → 10 No.s
- ❖ International Conference Papers → 12 No.s
- ❖ Member → Optical Society of America (OSA)
- ❖ Member → Indian Institute of Chemical Engineers (IChE)

Core Competency:

Strategy of New Product Development



Greenfield Facility Establishment



Material Characterization



Project Proposal



Idea Generation & Proof of Concept



Technical Problem Solving



Technical Content Development



Project Management



Pilot Plant Designing



Process Optimization & SOP



Patent Management



EHS & Regulatory Compliance



Professional Experience:

- Presently holding portfolio as “R&D Scientist” at Sahajanand Laser Technology Limited (SLTL), Gandhinagar, Gujarat since June 2016. Developed Strategy, product planning, demonstration of proof of concept, material selection and SOP formulation of following projects –
 - ❑ DC plasma CVD system for diamond synthesis;
 - ❑ Raw diamond inclusion mapping system through matching RI glasses;
 - ❑ Pilot plant for chalcogenide glass processing;
 - ❑ Biofuel generation through laser induced decomposition of agricultural waste;
 - ❑ Compact plastic waste recycling system by applying IR heaters;
 - ❑ Superheated steam dryer by utilizing thin film heater;
 - ❑ Automated laser cutting system for small diamonds;
 - ❑ Automated laser marking system for biopsy cassettes.
- Previously worked as “Research Scholar” followed by “Technical Consultant”, at CSIR-Central Glass and Ceramic Research Institute - Kolkata, from October 2009 to May 2016.
 - ❑ Specialty Glass and Optical Fiber Technology sponsored by CSIR, India [responsible for development of large core Yb-doped fibers for high power laser applications and small core Er-doped fibers for fiber amplifier applications].
 - ❑ Development of Rare Earth Doped Fibers for High Power Fiber Lasers through Nanoparticle Deposition sponsored by MeitY, India [responsible for development, optimization and demonstration of gas phase rare earth chelate doping method].
 - ❑ Vapor Phase Doping Process for Fabrication of Rare Earth Doped Optical Fibers [Project work for PhD Thesis including varied fiber structure (viz. LMA, Pedestal, LFM); low refractive index fiber (through fluorine doping); low photodarkening fiber (through $\text{Al}_2\text{O}_3/\text{P}_2\text{O}_5$ doping); very low water content fiber (through chlorine doping)].
- Have rich experience of R&D facility establishment including supervision of state-of-the-art pilot scale plant installation for modified chemical vapor deposition (MCVD) system for manufacturing of optical fiber preforms as well as development of CVD systems.
- Developed process know-how for making important varieties of glass hosts suitable for making fiber amplifier and lasers.
- Excellent problem solving attitude based on in-depth scientific knowledge, diversified R&D experience and unprecedented analytical skills.
- Proficient in different material as well as optical characterization techniques which are commonly used in material science and fiber optics domain.
- Competent in Project Proposal and Report Writing as per the different Government R&D Funding Schemes including DST, GITA, DRDO, BIRAC, CSIR, MeitY etc.
- Rich working experience in Intellectual Property Management by overseeing IP portfolio of the company which includes drafting, reply to examination report, infringement and revocation application.
- Have delivered several invited talks on national level seminars on behalf of the company and peer reviewed various technical manuscripts of SCI journals on invitation from the editors.

Award & Achievements:

- ✓ International project grants from Global Innovation Technical Alliance (GITA) under Canada-India bilateral scheme in May, 2020 and Israel-India bilateral scheme in April, 2020.
- ✓ Invited Talk on Innovative radiant energy based applications developed indigenously at Sahajanand Laser Technology Limited, at “Plasma Colloquium” - Institute of Advance Research, Gandhinagar.
- ✓ Book Chapter on Indigenous Laser Solutions at Sahajanand Laser Technology Ltd, published by Springer India, in July, 2018.
- ✓ Foreign Travel Award from the Optical Society of America (OSA) in August, 2014 for delivering Oral presentation in 3rd JSAP-OSA Joint Symposia 2014 conference under the scheme of “OSA Foreign Travel Grant for research scholars”.
- ✓ Best Oral Presentation Award in 3rd Research Scholars’ Day Workshop at CSIR – CGCRI, Kolkata in August, 2014.
- ✓ CSIR Travel Award in April, 2013 for delivering Oral Presentation in SPIE Optics and Optoelectronics 2013 Conference under the scheme of “CSIR Foreign Travel Grant for young scientists/research scholars”.
- ✓ Best Oral Presentation Award in 2nd Research Scholars’ Day Workshop at CSIR – CGCRI, Kolkata in August, 2013.
- ✓ Gold Medal from S. E. Railway Women’s Welfare Society for securing highest marks at Kharagpur Subdivision in Secondary Board Examination 1997.

Professional Training:

- ⇒ State Level Seminar on “Recent Trends in Renewable Energy Sources” organized by Gujarat Council of Science and Technology, Ahmadabad.
- ⇒ International Intellectual Property Summit 2018 “Towards an Intellectual Era” organized by Ahmadabad Management Association, Ahmadabad.
- ⇒ National Workshop on “Plasmas for Societal Benefits” organized by Institute for Plasma Research, Gandhinagar, Gujarat.
- ⇒ National Workshop on “IP Awake: Awareness Seminar on Intellectual Property Rights” organized by Confederation of Indian Industry and Indian Patent Office, Ahmadabad.
- ⇒ PhD Course work on “Research Methodology and Technical Writing” at Jadavpur University, Kolkata.
- ⇒ International Workshop on Emerging Areas in Photonics and Future Applications organized by CSIR-CGCRI, Kolkata.
- ⇒ Indo-Japan International Workshop on “Specialty Optical Fiber, Nano-photonics and Devices” organized by CSIR-CGCRI, Kolkata.
- ⇒ DST-SERC School (one month duration) on “Guided Wave Optics and Devices” organized by CSIR-CGCRI, Kolkata.
- ⇒ Workshop on “Valves and Fittings” organized by Swagelok, India at CSIR-CGCRI, Kolkata.
- ⇒ One month summer training at Indian Oil Corporation Ltd, Haldia, West Bengal.
- ⇒ One month summer training at Consolidate Fibers & Chemicals Ltd, Haldia, West Bengal.

Academic Qualification:

- PhD in Engineering from Jadavpur University, India in 2018
- M. Tech. in Chemical Engineering from University of Calcutta, India in 2009 with 1st class
- P.G. Diploma in Safety Engineering from West Bengal State Council of Technical Education, India in 2006 with 1st class
- B. Tech. in Chemical Engineering from Berhampur University, India in 2005 with 1st class

Computing Skills:

- ✓ MS Word, Excel, Power Point
- ✓ Origin, AutoCAD, Ansys-Fluent, MINITAB

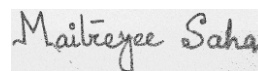
Personal Details:

- ❑ Date of Birth :8thDecember, 1980
- ❑ Nationality :Indian
- ❑ Religion :Hindu
- ❑ Marital status :Married
- ❑ Hobbies :Gardening, Reading Novels, Watching Theaters
- ❑ Language Efficiency :English, Bengali & Hindi
- ❑ Permanent Address :6/6A, 'Anjana' Apartment, Flat No. B-2 (2nd Floor), Sahid Nagar,
PO- Haltu, PS – Garfa, Kolkata – 700078, West Bengal, India.
- ❑ Reference :Dr. Ranjan Sen (PhD Supervisor)
Ex-HOD, Fiber Optics & Photonics Division (CGCRI, Kolkata, India)
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I hereby state that all the above mentioned information are true as per my knowledge and believe and if found incorrect in future, I will be solely responsible for that.

Place: Gandhinagar

Date: 10thSeptember, 2020



(Maitreyee Saha)