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ACADMIC QUALIFICATION

	ree	versity		ect (s)			
	th)	Dharamshala H.P.		ng, Hindi, Sc., kt			Position
		Dharamshala H.P.		n, Maths, I.T.			
		hla		nem, Maths			
		hla					
		hla					

		Delhi		Sciences			
		igam Vihar, Shimla		Sciences			

RESEARCH EXPERIENCE

- *31st December, 2009 to 30th December, 2011(Junior Research Fellow)*
Chemistry Department, Himachal Pradesh University, Shimla.
- *31st December, 2011 to 31st December, 2014(Senior Research Fellow)*
Chemistry Department, Himachal Pradesh University, Shimla,

ACHIEVEMENTS

- √ *Merit Certificate for securing 53rd position in 10th Examination held in March, 2002 by the Himachal Pradesh Board of School Education, Dharmashala.*
- √ *Qualified CSIR-JRF in July 2009 and was a recipient of fellowship by CSIR-New Delhi during the research period.*
- √ *Ph.D. [Nov. 2015] (Physical Chemistry/Material Science) entitled as “SYNTHESIS, CHARACTERIZATION AND APPLICATIONS OF NANOSTRUCTURE ZINC OXIDE” from Himachal Pradesh University Shimla, India.*
- √ *Awarded with Senior Research Fellowship (SRF) from 31 December, 2011 to 31 December, 2014.*

v *Qualified State Eligibility Test (S.E.T) conducted by HPPSC, Nigam Vihar, Shimla, in August, 2014.*

v *1st position in Certificate course in French from Himachal Pradesh University, Shimla.*

v *Awarded A grade in Advanced Diploma in Software & Information Technology by Himachal Computer Center, NEOTECHS.*

PAPER PUBLISHED IN INTERNATIONAL JOURNALS

- 1) Utilization of ZnO Nanocones for the Photocatalytic Degradation of Acridine Orange. M. S. Chauhan, **R. Kumar**, Ahmad Umar, S. Chauhan, G. Kumar, M. Faisal, S. W. Hwang, and A. Al-Hajry. *Journal of Nanoscience and Nanotechnology*, (2011), 11, 1. **(I.F. 1.354)**
- 2) Large-scale synthesis of ZnO balls made of fluffy thin nanosheets by simple solution process: Structural, optical and photocatalytic properties. Ahmad Umar, M.S. Chauhan, S. Chauhan, **R. Kumar**, G. Kumar, S.A. Al-Sayari, S.W. Hwang. *Journal of colloid and Interface Science* (2011) 363, 521. **(I.F.6.361)**
- 3) Applications of ZnO Nanoflowers as Antimicrobial Agents for Escherichia coli and Enzyme-Free Glucose Sensor. Ahmad, M.S. Chauhan, S. Chauhan, **R. Kumar**, P. Sharma, K.J. Tomar, R. Wahab, A.A. Hajry and D. Singh. *J. Biomed. Nanotechnol.* (2013) 9, 10. **(I.F. 5.068)**
- 4) Facile growth and characterization of α -Fe₂O₃ nanoparticles for photocatalytic degradation of methyl orange. P. Sharma, **R. Kumar**, S. Chauhan, Dilbag Singh and M.S. Chauhan *Journal of Nanoscience and Nanotechnology*, (2014)14, 6153. **(I.F. 1.354)**
- 5) ZnO Nanoparticles: Efficient material for the detection of hazardous chemical. **R. Kumar**, M. S. Chauhan, G. N. Dar, S. Ansari, J. Wilson, Ahmad Umar, S. Chauhan, D. S. Rana, P. Sharma. *Sensor letters* (2014) 12, 1393.
- 6) Iron-doped ZnO nanoparticles as potential scaffold for hydrazine chemical sensor. **Ramesh Kumar**, Dilbag Rana, Ahmad Umar, Pankaj Sharma, Suvarcha Chauhan and Mohinder Singh Chauhan. *Sensor letters* (2014) 12, 1273.

- 7) Ag-Doped ZnO Nanoellipsoids: Potential scaffold for photocatalytic and sensing applications. **Ramesh Kumar**, Dilbag Rana, Ahmad Umar, Pankaj Sharma, Suvarcha Chauhan and Mohinder Singh Chauhan. *Talanta* (2015) 137, 204. (I.F. 4.916)
- 8) Zinc based hydroxide/oxide and Zinc Hydroxy Stannate nanostructures as potential scaffold for environmental remediation. O.F. Lopes, V.R. de Mendonça, A. Umar, M. S. Chuahan, **R. Kumar**, S. Chauhan, C. Ribeiro. *New J. Chem.*, (2015), 39, 4624. (I.F. 3.069)
- 9) Selective Fluorescence Detection of Cyanide Ions, Efficient Photocatalytic and Antimicrobial Properties of Cadmium Oxide Nanodiscs. P. Sharma, D.S. Rana, **R. Kumar**, M.S. Chauhan, S. Chauhan and A. Umar *Talanta* (2016), 153, 57. (I.F. 4.916)
- 10) Facile growth, of CdS nanoparticles characterization and its photocatalytic and antimicrobial applications. P. Sharma, D.S. Rana, **R. Kumar**, M.S. Chauhan and A. Umar. *Ceramic International*. (2016), 42 (6) 6601. (I.F. 3.450)
- 11) Synthesis, Characterization and sensing application of iron oxide nanoparticles against hydroquinone. P. Sharma, D.S. Rana, **R. Kumar**, M.S. Chauhan and A. Umar. *Sci Adv Mater*. (2015), 7, 2747. (I.F. 3.585)
- 12) Synthesis, Characterization and photocatalytic application of iron oxide nanocubes. P. Sharma, D.S. Rana, K. Kumar, **R. Kumar**, S. Chauhan, M.S. Chauhan and A. Umar *Nanosc. and Nanotech. Letter*. (2016), 8, 1014. (I.F. 2.917)
- 13) Fe-doped ZnO nanoellipsoids for enhanced photocatalytic and highly sensitive and selective picric acid sensor. **Ramesh Kumar**, Ahmad Umar, Dilbag Singh Rana, Pankaj Sharma, Mohinder Singh Chauhan and Suvarcha Chauhan. *Material Research Bulletin* (2018) 102, 282. (I.F.3.355)
- 14) Iron Oxide Nanoparticles as Potential Scaffold for Photocatalytic and Sensing Applications. Kuldeep Negi, Dilbag Singh Rana, Manoj Kumar, Pankaj Sharma, **Ramesh Kumar**, Ahmad Umar, Suvarcha Chauhan, and Mohinder Singh Chauhan. *Journal of Nanoscience and Nanotechnology* (2019)19(5), 2695. (I.F. 1.354)
- 15) Synthesis, Characterization, Photocatalytic and Sensing Properties of Mn-Doped ZnO Nanoparticles. M Kumar, K Negi, S Chauhan, A Umar, **R Kumar**, Y Masuda, MS Chauhan. *Journal of nanoscience and nanotechnology* (2019) (12), 8095-8103. (I.F. 1.354)
- 16) ZnO–SnO₂ Nanocubes for Fluorescence Sensing and Dye Degradation Applications. **Ramesh Kumar**, Ahmad Umar, Rajesh Kumar, M.S. Chauhan and Yas Al-Hadeethi. *Ceramics International* (2021), 47(5), 6201-6210 (I.F. 3.450)
- 17) Low-temperature synthesis of cadmium-doped zinc oxide nanosheets for enhanced sensing and environmental remediation applications. **Ramesh Kumar**, Ahmad Umar, Rajesh

- Kumar, D. Rana and M.S. Chauhan. *Journal of Alloys and Compounds*. (2021), 863, 158649. [\(I.F. 4.175\)](#)
- 18) Spindle-like $\text{Co}_3\text{O}_4\text{-ZnO}$ Nanocomposites Scaffold for Hydrazine Sensing and Photocatalytic Degradation of Rhodamine B Dye. **Ramesh Kumar**, Ahmad Umar, Rajesh Kumar, M. S. Chauhan, Girish Kumar and Suvarcha Chauhan. *Engineered Science*, (2021), 16, 288–300. [\(Scopus 14.9, Cite Score 2023\)](#)
 - 19) Effective Fluorescence Detection of Hydrazine and the Photocatalytic Degradation of Rhodamine B Dye Using CdO-ZnO Nanocomposites. Ahmad Umar, **Ramesh Kumar**, M. S. Chauhan, R. Kumar, A.A. Ibrahim, M. Alhamami, H. Algadi and M.S. Akhtar. *Coatings* (2022), 12, 1959. [\(I.F. 2.9\)](#)
 - 20) Sustainable activated carbon derived from *Parthenium hysterophorus* for levofloxacin removal and supercapacitor applications. Vishal, Sahil, Ritika Sharma, **Ramesh Kumar**, Dharmender Singh Rana, Neeraj Gupta, Dilbag Singh. *Journal of Porous Materials*, (2025), 1-17. [\(I.F. 3.2\)](#)

BOOKS PUBLISHED

- 1) Published a book entitled as “**Atomic Structure, Bonding, General Organic Chemistry & Aliphatic Hydrocarbons Lab**” Publisher: Akash Publishing House with ISBN 93-91743-00-5
- 2) Published a book entitled as “**States Of Matter, Chemical Kinetics & Functional Organic Chemistry Lab**” Publisher: Akash Publishing House with ISBN 93-91743-03-X
- 3) Published a book entitled as “**Solutions, Phase Equilibrium, Conductance, Electrochemistry & Organic Chemistry Lab**” Publisher: Akash Publishing House with ISBN 93-91743-70-6
- 4) Published a book entitled as “**Chemistry of Main Group Elements, Chemical Energetics and Equilibria Lab**” Publisher: Akash Publishing House with ISBN 93-91743-71-4
- 5) Published a book entitled as “**Quantum Chemistry, Molecular Spectroscopy & Photochemistry Lab**” Publisher: Akash Publishing House with ISBN 81-961713-3-1
- 6) Published a book entitled as “**Polymer Chemistry Lab**” Publisher: Akash Publishing House with ISBN 81-961713-4-X

ABSTRACTS PUBLISHED IN NATIONAL AND INTERNATIONAL CONFERENCES

- 1) Successfully participated in the **One-Day Academic Conclave on "NEP 2020 in Practice: Challenges and Opportunities for Higher Education"**, organized by Alakh Prakash Goyal Shimla University, Shimla, in collaboration with Government College, Solan and Rajiv Gandhi Government College, Chaura Maidan, Shimla, on March 28, 2026.
- 2) Presented a research paper entitled **"Statistical Methods and Data Visualization for Interdisciplinary Research"** at the **International Conference on "Applications of Statistical Methods and Data Visualization for Humanities, Commerce and Management, Environment and Scientific Studies"**, sponsored by the **Economic & Statistics Department, Government of Himachal Pradesh**, organized by the **IQAC, Government Degree College Baldwara, District Mandi (Himachal Pradesh)** on **7 March 2026**.
- 3) Presented a research paper titled **"Harnessing AI Tools for Transformative Research and Innovation"** at the *International Interdisciplinary Conference on "Integration of AI and Automation in Syllabi Across Disciplines in Higher Education"*, organized by the **Department of English, Government College Solan** held on **22–23 December 2025**.
- 4) Presented a research paper entitled as **"Ecological Consequences of Disasters: Implications for Wildlife Conservation and Biodiversity Resilience"** **International Conference on Disaster Management: Interdisciplinary Approaches to Resilience, Recovery and Risk Reduction** held on 8th November 2025 organized by Govt. Degree College Dehar, Distt. Mandi (HP) 175030
- 5) Presented a research paper entitled as **"Strengthening Youth Engagement in Agriculture: Capacity Development for Entrepreneurial Growth in Himachal Pradesh"** in ICSSR sponsored International Conference on the theme Capacity Building and Youth's Perception of Agriculture Entrepreneurship in Himachal Pradesh Under Vision Viksit Bharat @2047 on 25th and 26th March 2025 organized by Shoolini University Himachal Pradesh, Rajkiya Kanya Mahavidyalaya (RKMV) Himachal Pradesh in collaboration with Department of Agriculture, Department of Industries Himachal Pradesh.

- 6) Attended International Conference on Future Learning held on 18th January 2025 organized by Chitkara University, Punjab-140401, India.
- 7) Presented a research paper entitled as “**Integrating Green Chemistry with Digital Solutions for Global Sustainability**” in International Conference Digital Transformation and its Impact on Business Economy and Environment: Sustainable Development Goals (SDGS) held on 29th-30th November 2024 at RNT Govt. Degree College Sarkaghat, Distt. Mandi, H.P.
- 8) Presented a research paper entitled as “**Smart Solutions for a Greener Planet: Unleashing the Power of Green Technology**” in Two Days International Conference (Hybrid Mode) on Resilient Women, Innovative Solutions And Sustainable Environment (RISE-2024) held on 25-26 November 2024 organized by Government College Bhoranj (Tarkwari), Hamirpur (H.P.)
- 9) Presented a research paper entitled as “**Optimizing Chemical Sensing and Photocatalysis with Mn-Doped ZnO Nanomaterials**” in International Conference on Recent Advances in Materials & Biological Sciences held on 19-20 November 2024 organized by Centre of Excellence Govt. College Sanjauli Shimla-06, District Shimla-06, HP, India.
- 10) Presented a research paper entitled as “**Heterogeneous Photocatalysis: A Key Solution for Environmental Remediation**” in International Conference on Recent Developments on Interfaces of Chemistry, Biology and Material Sciences towards Health and Environment (ICBMHE-2024) held on 8th -10th October 2024 organized by Department of Biotechnology and Bioinformatics at Jaypee University of Information Technology Solan, Himachal Pradesh, INDIA
- 11) Presented a research paper entitled as “Biomedical and High Frequency Applications of gadolinium doped Mg Ferrite” in International Conference on “Advances in Mathematical Sciences, Scientific Computing and its Applications” held on March 22–23, 2024 organized by Centre of Excellence, Govt. College Sajauli, Shimla, H.P. funded by DBT-Govt. of India.
- 12) Presented a research paper entitled as “Food Adulteration: Its Effects on Nutritional Balance and Our Health” in International Conference on Communicating Health, Happiness & Longevity For Sustainable Growth, hybrid mode held on 2nd – 4th December 2023 organized by Government College, Ani, Kullu & HFRI Shimla-9 in association with SMS, HP, HNE Health Care, Haryana, Zyxxes Strategy Labs Pvt. Ltd., and Berry Markets Ltd., Dubai.

- 13) Presented a research paper entitled as “Low Temperature Large Scale Synthesis of Novel $\text{Co}_3\text{O}_4\text{-ZnO}$ Heterostructure Nanomaterial for Enhanced Photocatalytic and Chemical Sensing Properties” in International Conference on “Environmental Concerns, Climate Change, and Resource Management in the Western Himalayas” on the occasion of World Environment Day, from 5th to 6th June 2023, organized by Rabindranath Tagore Government College Sarkaghat, Distt. Mandi (H.P.).
- 14) Presented a research paper entitled as “Environmental Remediation Applications of Metal Oxide and Transition Metal Doped ZnO Nanostructures Synthesized via Facile Solution Process” in National Seminar on “Environmental Concern in the Himalayan Region” being organized by Government. College Jukhala, Himachal Pradesh on 20th May, 2023.
- 15) Presented a research paper entitled as “Highly Effective and Significantly Enhanced Water Decontamination as well as Chemical Sensing Applications of ZnO Nanorods” in International Conference on Empowering Individuals for a better future, multi-disciplinary, Hybrid mode held on 12th - 14th May, 2023 organized by Science and Management Society, Himachal Pradesh at APG Shimla University, Shimla-171013, H.P.
- 16) Presented a research paper entitled as “Chemical Synthesis, Characterization and Environmental Remediation Applications of Ni doped ZnO Nanoparticles Synthesized via Facile Solution Approach in National Conference on “Novel Progressions in Science & Technology-2022” held on 28-29th November 2022 at St. Bede's College Shimla, H.P.
- 17) Presented a research paper entitled as “Improved Sensing and Photocatalytic Properties of Cadmium-doped Zinc Oxide Nanostructures” in International conference on “Recent Trends in Bio and Material Sciences’ RTBMS-2022 held on 10-11 October, 2022 at Sardar Patel University, Mandi, H.P. organized by Him Science Congress Association (HSCA).
- 18) National conference on “Higher Education for Nation Building” organized by Himachal Pradesh Mahavidyalaya Shaikshik Sangh at Rajeev Gandhi Government College Chaura Maidan, Shimla on 2nd January 2020.
- 19) National conference on “Issues and Challenges in Higher Education-II” organized by Himachal Government College Teachers’ Association (HGCTA) at Hotel Peterof Shimla on 5th December, 2019.

- 20) Presented a research paper entitled as “Enhanced Photocatalytic and Chemical Sensing Applications of Co-Doped ZnO Nanoparticles Synthesized by Facile Solution Process” in National Seminar on Future India: Science And Technology, organized by Indian Science Congress Association Shimla Chapter And Himachal Pradesh University Summerhill Shimla-171005 on dated 22nd May 2019.
- 21) National Conference on Smart Materials: Advances in Research and Technologies (SMART-2015) held at Shoolini University, Solan, on 26-27 Nov., 2015
- 22) National seminar on frontiers in polymer science-II (FPS-2013) organized by Department of Chemistry, H.P. University, Shimla on 12-13 December, 2013
- 23) 1st Annual National Conference on Science Emerging Scenario and Future Challenges Organised by Him Science Congress Association Himachal Pradesh in Shoolni University from 8-10 March, 2013.
- 24) 7th National conference on Thermodynamics of Chemical, Biological and Environmental Processes Organised by Sri Venkateswara University, Trupati from 10-12 December, 2012.
- 25) Chemical Constellation Cheminar-2012, Theme: Chemistry for Sustainable Development and Innovations (An International Conference) organised by Department of Chemistry, Dr. B.R. Ambedkar NIT, Jalandhar, Punjab on 10-12 Sept., 2012
- 26) National Seminar on Experimental and Computational Techniques in Material Science Organised by Department of Physics Himachal Pradesh University, Shimla from 31st March to 2nd April, 2012.
- 27) National seminar on frontiers in polymer science organized by Department of Chemistry, H.P. University, Shimla on 18-19 November, 2011.
- 28) National conference on emerging trends in chemistry-biology interface held in Department of Chemistry, Kumaun University, Nainital on 3-5 November, 2011.
- 29) National symposium on chemistry innovation for human well being held in Department of Chemistry, H.P. University, Shimla on 21-22 October, 2011.
- 30) National conference on recent trends in materials sciences, organized by Department of Physics, Jaypee University, Solan on 8-10 October, 2011.
- 31) National workshop cum seminar on advances in electron microscopy & allied fields held in Department of Physics & Chemistry, Shoolini University, Solan on 23-29 September, 2011.

- 32) International conference on Chemistry: Frontiers and Challenges, organised by Department of Chemistry, AMU, Aligarh on 5-6 March, 2011.
- 33) Prof. Ram Chand Paul, International Conference on Emerging Trends in Chemistry, organised by Department of Chemistry, Panjab University, Chandigarh on Feb. 11-12, 2011.
- 34) 3rd National Symposium on Analytical Sciences (NSAS) on Recent Advances in Analytical Sciences organised by Department of Chemistry, Himachal Pradesh University, Summer Hill, Shimla on 12-14 April, 2010.

NATIONAL AND INTERNATIONAL WEBINARS ATTENDED

- 1) International webinar on “Nanotechnology for Environmental Remediation” organized by P.G. Department of Chemistry, DAV College Abohar, Punjab held on 2nd June 2020.
- 2) National Webinar on “Jal Shakti Abhiyan: Water and Environment” organised by Ek Bharat Shreshtha Bharat (EBSB) Club and Department of Chemistry, Govt. College Bilaspur, H.P. held on 5th June, 2020.
- 3) International webinar on “Recent Progress In Therapeutic Intervention For COVID-19” organized by Department of Zoology and Environmental Sciences, School of Basic and Applied Sciences, Maharaja Agrasen University Baddi, Solan held on 6th June 2020.
- 4) National webinar on "Let's Talk About Science: How, What And Why" organized by School of Basic and Applied Sciences, Maharaja Agrasen University, Atal Shiksha Kunj, Kalujhanda, Baddi, Solan held on 08th June, 2020.
- 5) National webinar on “Material Science: Advances and Applications” organized by Department of Chemistry, MCM DAV College Kangra (H.P.) held on 13th June 2020.
- 6) International Symposium on “Synthesis and Characterization of Smart Materials and Their Potential Applications (ISSCSMPA-2020)” organized by University School of Basic and Applied Sciences, Guru Gobind Singh Indraprastha University, New Delhi, India during 14th -17th June, 2020.
- 7) National webinar on “Electrochemical Biosensor for Covid-19 detection” organized by Sinsil International Pvt. Ltd. held on 16th June, 2020.
- 8) National webinar on “Stereochemistry” organized by P.G. Department of Chemistry, DAV College Abohar, Punjab held on 16th June 2020.
- 9) International Webinar on "Robotics and the Future of Healthcare" organized by St. Xavier's College, Nevta, Jaipur, Rajasthan held on 19th June, 2020.

- 10)** National webinar on “Research on Nanocatalysis and its Recent Trends in Organic Synthesis” organized by PG Department of Chemistry, DAV College Dasuya, Punjab held on 22nd June, 2020.
- 11)** International webinar on “Better Understanding of Pandemic COVID-19” organized by IQAC of Kharagpur College, West Bengal, India held on 23rd June, 2020.
- 12)** National Webinar on “Artificial Intelligence Robotics” organized by Department of EEE & ECE of Gandhi Institute of Excellent Technocrats Ghangapatna, Bhubaneswar, Odisha held on 26th June 2020.
- 13)** International Webinar on “Inclusive Education: Reaching the Unreached” organized by State Council of Educational Research and Training (SCERT), New Delhi, India held on 27th June 2020.
- 14)** Indo-Korea Virtual Conference on Development of Advanced Materials for Future Technologies (DAMFT-2020) Jointly Organized by VIT Chennai, India & Jeonbuk National University, Jeonju, South Korea held during 9th -10th July, 2020.
- 15)** National webinar entitled as ‘Towards Excellence in Higher Education in India in 21st Century’ organized by Department of Chemistry, Dr. B. R. Ambedkar National Institute of Technology, Jalandhar held on 15th July, 2020.
- 16)** National webinar on “Concepts, Innovations and Methods when Chemistry meets Biology” organized by Department of Chemistry Kharagpur College and NASI India, Kolkata Chapter held on 17th July, 2020.
- 17)** National webinar on “Plastic Pollution amidst COVID-19: Protector or Polluter” organized by TERI (The Energy and Resources Institute) ENVIS, Resource Partner on Renewable Energy and Climate Change, Indian Habitat Centre, New Delhi held on 31st July 2020.
- 18)** One Week Online Short Term Course on “Chemistry for Engineering Applications” organized by Department of Chemistry, Dr. B. R. Ambedkar National Institute of Technology Jalandhar, Punjab -144011 held during 14th -18th September , 2020.
- 19)** International Webinar on “Applications of Mass Spectroscopy in Chemistry and Beyond” organized by Department of Chemistry, BMS Institute of Technology & Management, Bengaluru, India on 19th September, 2020.
- 20)** International Webinar on “RASPD+: Machine Learning for Fast Protein-Ligand Binding Free Energy Prediction and its Applications to SARS -CoV-2 Targets” organized by Department of Chemistry, BMS Institute of Technology & Management, Bengaluru, India on 3rd October, 2020.
- 21)** Webinar Series 2020 on “Characterization Techniques for Nanoparticles & Data Analysis” organized by Rayat Bahra University, Mohali, Punjab on 13th -14th October, 2020

- 22)** National Webinar on “Teaching and Learning Practices” organized by Department of Biotechnology and Bioinformatics, Jaypee University of Information Technology, Waknaghat, Solan (H.P.) on 17th October , 2020.
- 23)** National Webinar on "Environmental Sustainability Through Green Technologies: Present & Future" jointly organized by Jhargram Raj College Physics Alumni Association (JRCPAA), and Department of Physics, Jhargram Raj College, West Bengal on 17th October, 2020.
- 24)** Crossing biological barriers – smart modalities to improve performance of polymer nanocarriers” under International Lecture Series entitled “Multifaceted Chemistry: An ever-evolving domain of science” held on 07/03/2021 through online mode organized by Department of Chemistry, Deshbandhu College, University of Delhi, Kalkaji, New Delhi, India-110019
- 25)** 5-Day Faculty Development Programme on “Accelerating Innovations In Material Science-Surface Characterization”, organized by Department of Chemistry, BMS Institute of Technology & Management, Bengaluru, India from 18th to 22nd May, 2021.
- 26)** Two days online Workshop on Analytical Instrumentation organized by Sophisticated Analytical Instrumentation Facility, Panjab University, Chandigarh and Maharaja Lakshman Sen Memorial College Sundernagar, Mandi, H.P. on July 1 & 2 , 2021
- 27)** National Webinar on Virtual Training Programme on School Safety- Sirmaur District, Himachal Pradesh organized by Zone 4 Solution, New Delhi, India in association with DDMA Sirmaur on 1st September , 2021.
- 28)** A talk session on “NEP-2020 and the Directions of Change in Higher Education” by Prof. N.V. Varghese, Vice Chancellor, NIEPA, New Delhi, organised by the Internal Quality Assurance Cell of St. Bede’s College, Shimla on 16th September, 2021.

ORAL PRESENTATIONS IN NATIONAL/INTERNATIONAL WEBINARS:

- 1)** Presented a paper entitled as “Photocatalytic and Electrochemical Sensing Applications of Co₃O₄-Doped ZnO Nanospindles” in the Indo-Korea Virtual Conference on Development of Advanced Materials for Future Technologies (DAMFT-2020) Jointly Organized by VIT Chennai, India & Jeonbuk National University, Jeonju, South Korea held during 9th -10th July, 2020.

SHORT TERM COURSE:

- 1) Participated in TEQIP-III sponsored One Week Online Short Term Course on “Chemistry for Engineering Applications” organized by Department of Chemistry, Dr. B. R. Ambedkar National Institute of Technology Jalandhar, Punjab -144011 held during 14th -18th September , 2020)

FACULTY DEVELOPMENT PROGRAMME

- 1) Successfully completed the **online weekly workshop** of Aahaar Kranti: Poshan Rasayan Pragma (International Online Workshop / Faculty Development Programme) from 07 April, 2026 to 12 May, 2026 for six weekly sessions, organized by the Global Indian Scientists and Technocrats Forum (GIST) & LBSGDC, Saraswati Nagar, in appreciation of dedication, time, and energy towards the mission of nutritional awareness in the society and community.
- 2) Successfully completed a **One-Week Faculty Development Programme and Training on "LaTeX"** from April 22 to April 29, 2026 , organized by Government College Solan with course material provided by EduPyramids, SINE, IIT Bombay , and successfully cleared the online examination conducted remotely from IIT Bombay with a score of 83.33% (Earned 2 Edu Credits) on May 7, 2026 .
- 3) Successfully completed a **One-Week Faculty Development Programme and Training on "Avogadro"** from March 23 to March 30, 2026 , organized by Government College Solan with course material provided by EduPyramids, SINE, IIT Bombay , and successfully cleared the online examination conducted remotely from IIT Bombay with a score of 85.00% (Earned 1 Edu Credit) on May 16, 2026.
- 4) Successfully completed a **One-Week Faculty Development Programme** on *Moodle Learning Management System* (08th–15th December 2025) and *Moodle Test for Teachers Training* (29th December 2025) organized by Government College Solan in collaboration with EduPyramids, Society for Innovation and Entrepreneurship (SINE), IIT Bombay, Indian Institute of Technology Bombay, and Spoken Tutorial Project, IIT Bombay, securing 77.50% and earning 2 Edu Credits.
- 5) Attended and successfully completed one week **“International Faculty Development Program on “Integrating AI for Scholarly Research”** organized by PG & Research Department of Visual Communication Holy Cross College (Autonomous), Tiruchirappalli Tamil Nadu in Collaboration with Cape Comorin Trust, and Harvest (an

International Multidisciplinary and Multilingual Research Journal) w.e.f. 24th -30th September 2025.

6) Attended and successfully completed one Faculty Development Program (FDP) on the topic “Emerging Trends in the Use of Artificial Intelligence, Research Methodology and Innovative Teaching Tools In Education” organized by IQAC, Government College Solan w.e.f. 5th May 2025 to 10th May 2025. (Physical Mode) **(10.15AM to 1:30PM)**

7) Attended and successfully completed One Week Faculty Development Program (FDP) on “Service Rules and Regulations for Teachers in Higher Education” w.e.f. 1st May 2025 to 7th May 2025 organized by IQAC of S.C.V.B. Government College Palampur, Distt. Kangra (H.P.) (Hybrid Mode) **(2:00 PM to 4:45 PM)**

8) Attended and successfully completed one week Faculty Development Program (FDP) on “Leveraging Machine Learning and Generative AI for Process Automation” organized by AIU-Chitkara University Himachal Pradesh-Academic and Administrative Development Centre (AIU-CUHP-AADC) & IQAC, Chitkara University, Himachal Pradesh w.e.f. 16th March to 25th March, 2025.

9) Attended and successfully completed **International One Week Faculty Development Program** on Leveraging AI and Advanced Technology for Academia: Transforming Research and Pedagogy (Multidisciplinary) organized by Koneru Lakshmaiah (Deemed to be) University, Off Campus, Aziz Nagar, Hyderabad, India & Office of the Internationalization Mindanao State University-Sulu, Philippines in Collaboration with Cape Comorin Trust, India in Association with Harvest an International Multidisciplinary and Multilingual Research Journal w.e.f. 04th-10th December 2024

10) 5-Day Faculty Development Programme on “Accelerating Innovations In Material Science-Surface Characterization”, organized by Department of Chemistry, BMS Institute of Technology & Management, Bengaluru, India from 18th to 22nd May, 2021.

TRAINING PROGRAMME

(1) Attended and successfully completed the **HIV/AIDS Training Programme / Workshop** organized by the Health & Family Welfare Department, Solan (Himachal Pradesh) under the aegis of the **National AIDS Control Organisation (NACO)**, held on 11 December 2025 at the Conference Hall, CMO Office, Solan.

(2) Attended and successfully completed **Two-Days Training Programme** organized by the Bureau of Indian Standards (BIS) Branch Office Parwanoo, on the topic "Learning Science via Standards" held from 12th-13th November, 2024 at Institute of Engineers, Nigam Vihar, Shimla.

(3) Attended and Successfully completed “**Two Days Residential Training Programme for Mentors of Standard Clubs**” held on 15th and 16th December, 2022 at Hotel Oyster, Sector 17, Chandigarh organized by **Bureau of Indian Standard, (Ministry of Consumer affairs, Food & Public Distribution, Govt. of India) Himachal Pradesh Branch Office, Parwanoo-713220, Distt. Solan, (H.P.)**

(4) Attended and successfully completed IP Awareness/Training program under National Intellectual Properties Awareness Mission on 17th March, 2023 organized by Ministry of Commerce and Industry, Department for Promotion of Industry and Internal Trade, Office of the Controller General of Patents, Designs and Trade Marks, Government of India.

WORKSHOP

(1) Participated in a Workshop on "Inside Artificial Intelligence: From Origins to Real-World Impact and Ethical Innovation" organized by IAPT RC-23 in collaboration with the Department of Physics & Photonics Science, NIT Hamirpur and UIT, Himachal Pradesh University, Shimla, under the initiative "Mission to Make Himachal Skillful" on dated 20th March 2026.

(2) Participation in one-day workshop on the theme of "**Traditional Knowledge and Intellectual Property Rights (IPR)**" held on 22nd August 2025 at Government College, Solan.

(3) Participation in one day workshop on the theme “Improving Transparency and Accountability in Government through effective implementation of Right to Information

Act” held on dated 31st March, 2023 organized by Govt. College Solan, in collaboration with District Administration Solan.

- (4) Attended Science and Technology Teacher’s Workshop on Artificial intelligence and IoT/Advances in Biotechnology and Bioinformatics in Third National Science Day Symposium (NSDS-2024) held on 28th February 2024 organized by Jay Pee University of Information Technology, Wagnaghat, Solan, H.P.

FIP/ ORIENTATION COURSE/ REFRESHER COURSE

- (1) Successfully completed a 4-Week Faculty Induction/Orientation Programme for “Faculty in Universities/Colleges/Institutes of Higher Education” from 22nd March to 20th April, 2023 and obtained Grade A⁺ organized by Teaching Learning Centre Ramanujan College, University of Delhi under the aegis of Ministry of Education Pandit Madan Mohan Malaviya National Mission on Teachers and Teaching.

REFRESHER COURSE

- (1) Successfully completed Two week online Refresher Course on Physical and Chemical Sciences held from 10th December – 23rd December, 2024 and obtained Grade A⁺ organized by UGC-Malaviya Mission Teacher Training Centre (MM-TTC), Central University of Jammu.
- (2) Successfully completed a Two Week Refresher Course in Chemistry from 28th April to 11th May, 2024 and obtained **Grade A⁺** organized by Teaching Learning Centre Ramanujan College, University of Delhi under the aegis of Ministry of Education Pandit Madan Mohan Malaviya National Mission on Teachers and Teaching.

ANY OTHER SPECIAL CONTRIBUTION

1. One of the student name Kshitiz , Class B.Sc. 3rd Year (Chemistry Major), Secured First Position in M.Sc. Chemistry HPU Entrance Examination, 2022

RESOURCE PERSON:

- 1)** Acted as Resource Person on dated **28/11/2025** in the Six Days In-Service Training Programme for Lab Attendants & Junior Lab Attendants of School & Colleges in the field of Lab Technology, Lab Skills and Office Procedure organized by State Council of Education Research and Training (SCERT) Rabon, Solan (H.P.) 173211 and demonstrated in Chemistry lab on **“Hands on Practice: Reagent Preparation and Lab Safety Demonstration”**
- 2)** Acted as Resource Person and delivered a talk on the Topic **“Preparation and Standardization of laboratory Reagents and Safe Chemical Handling and Waste Management”** on dated on dated **26/11/2025** in the Six Days In-Service Training Programme for Lab Attendants & Junior Lab Attendants of School & Colleges in the field of Lab Technology, Lab Skills and Office Procedure organized by State Council of Education Research and Training (SCERT) Rabon, Solan (H.P.)
- 3)** Acted as Resource Person on dated **29/08/2025** in the Six Days In-Service Training Programme for Lab Attendants & Junior Lab Attendants of School & Colleges in the field of Lab Technology, Lab Skills and Office Procedure organized by State Council of Education Research and Training (SCERT) Rabon, Solan (H.P.) 173211 and demonstrated in Chemistry lab on the Topics **“Preparation of Reagents and Solutions” & “Chemistry Lab: Maintenance and Lab Safety”**
- 4)** Acted as **Resource Person** and delivered an expert lecture to the students of PM SHRI Kendriya Vidyalaya, 14 GTC, Subathu District Solan, Himachal Pradesh – 173206 through online mode on the topic: ***“Exploring Nano World: The Future of Materials and Innovation”*** on dated **18th July 2025**, Under “A day as A Scientist” STEM (Science, Technology, Engineering, and Mathematics) week celebration **14th -18th July 2025**.

5) Acted as **Resource Person** and delivered an expert lecture on Significance and Future Scopes as a Subject Chemistry in STEM (Science, Technology, Engineering, and Mathematics) courses to the school students of PM SHRI Kendriya Vidyalaya, 14 GTC, Subathu District Solan, Himachal Pradesh – 173206 on dated **24th February 2025**.

6) Acted as Resource Person and delivered a talk on the Topics **“Preparation of Reagents and Solutions” & “Chemistry Lab: Maintenance and Lab Safety”** on dated 20/02/2025 in Six Days In-Service Training Programme for Lab Attendants & Junior Lab Attendants of School & Colleges in the field of Lab Technology, Lab Skills and Office Procedure organized by State Council of Education Research and Training (SCERT) Rabon, Solan (H.P.) 173211.

7) Acted as Resource Person and delivered a talk on the Topic **“Chemical Kinetics”** on dated **11-09-2024** in Six Days In-Service Teachers Training Programme for School lectures/PGT Chemistry organized by State Council of Education Research and Training (SCERT) Rabon, Solan (H.P.) 173211.

8) To acquaint the faculty with **Advanced Reference Management Tool for Effective Research Writing**, an invited talk was delivered in Conference room on dated 29th September, 2023 organised by Research and Development Cell Govt. College Solan.

9) An awareness program about **“Plastic Pollution: Harmful Effects and Solution”** on 2nd October, 2019, at Government College Rajgarh, District Sirmaur-173101, Sirmaur, Himachal Pradesh, India under “Swachhata Hi Sewa (SHS) 2019 Campaign, a jan andolan for Swachhata (w.e.f. 11th September, 2019 to 2nd October, 2019), and Plastic Waste Management (w.e.f. 3rd October to 27th October, 2019) initiated by Department of Drinking Water and Sanitation, Ministry of Jal Shakti, Government of India.

ADMINISTRATIVE & INSTITUTIONAL RESPONSIBILITIES

1) Served as the **Program Coordinator** for a week-long **Faculty Development Programme (FDP) on "LaTeX"**, organized at Government College Solan from April 22 to

April 29, 2026, which empowered 55 faculty members with advanced digital pedagogical competencies using course materials from EduPyramids, SINE, IIT Bombay.

2) Served as the **Program Coordinator** for a week-long **Faculty Development Programme (FDP) on "Moodle Learning Management System"**, organized at Government College Solan from December 8 to December 15, 2025, which empowered 47 faculty members with advanced digital pedagogical competencies using course materials from EduPyramids, SINE, IIT Bombay.

3) Awarded an **Appreciation Certificate** by the Principal of Government College Solan for demonstrating exceptional commitment, leadership, and professional excellence as the **Coordinator for Spoken Tutorial Courses (IIT Bombay)** during the **academic session 2025–26**, specifically for coordinating registrations, guiding students and faculty, organizing online tests, and driving digital competency and AI landscape adaptation.

CONFERENCE SESSIONS CHAIRED:

1) Chaired a Technical Session at the *International Conference on Disaster Management: Interdisciplinary Approaches to Resilience, Recovery and Risk Reduction*, held on 8th November 2025, organized by Government Degree College Dehar, District Mandi (HP) – 175030.

2) Co-chaired a session in the *International Conference on Advances in Mathematical Sciences, Scientific Computing and its Applications*, held on March 22–23, 2024, organized by the Centre of Excellence, Government College Sajauli, Shimla (H.P.), and funded by DBT, Government of India.

ACADEMIC INNOVATIONS, DIGITAL INITIATIVES, PROFESSIONAL CONTRIBUTIONS, EXTENSION ACTIVITIES, FACULTY DEVELOPMENT & AWARDS/RECOGNITIONS

1) **Institutional Coordinator – Spoken Tutorial Programme (IIT Bombay).** Served as the Institutional Coordinator of the Spoken Tutorial Programme (IIT Bombay) at Government College Solan during the academic session 2025–26. Successfully coordinated the implementation of ICT-enabled software training and certification programmes, facilitating the participation of more than 530 students and 102 faculty members. Through

strategic planning, mentoring, and seamless execution of training and online assessments, significantly enhanced digital literacy, software proficiency, employability skills, and technology-enabled learning across the institution. In recognition of these contributions, received a **Letter of Appreciation (2026) from Spoken Tutorial, EduPyramids, SINE, IIT Bombay, for outstanding efforts in promoting digital literacy, software education, and ICT-based teaching-learning practices.**

2) Programme Coordinator – Faculty Development Programme on Moodle Learning Management System. Served as Programme Coordinator for a week-long Faculty Development Programme on “Moodle Learning Management System” (8–15 December 2025). Successfully trained and empowered 47 faculty members with advanced competencies in digital pedagogy, e-content delivery, online assessment, course management, and blended learning methodologies. Received an Appreciation Certificate from the Principal, Government College Solan, for exemplary leadership and professional excellence in organizing and implementing the programme, thereby strengthening technology-driven teaching and learning practices within the institution.

3) Programme Coordinator – Faculty Development Programme on LaTeX. Served as Programme Coordinator for a week-long Faculty Development Programme on “LaTeX” (22–29 April 2026), facilitated capacity building of 55 faculty members in scientific documentation, academic writing, research publication, and professional document preparation using LaTeX. Received an Appreciation Certificate from the Principal, Government College Solan, in recognition of outstanding leadership and successful execution of the programme, which promoted research excellence, academic rigor, and digital innovation among faculty members.

4) Key Academic and Institutional Impact

- i)** These initiatives collectively benefited more than **630 students and faculty members**, fostering a culture of technological innovation, digital transformation, and capacity building initiatives.
- ii)** Established a strong culture of ICT-enabled teaching, learning, and professional development within the institution.
- iii)** Successfully coordinated nationally recognized skill-development and certification programmes in collaboration with IIT Bombay.
- iv)** Strengthened faculty competencies in digital pedagogy, e-learning technologies, scientific documentation, and research communication.
- v)** Enhanced students’ digital skills, **AI awareness, and ICT integration**, software proficiency, and employability through technology-integrated training programmes.
- vi)** Contributed significantly to institutional quality enhancement, innovation in pedagogy, and the adoption of modern educational technologies.

- vii) Earned multiple recognitions and appreciation certificates from IIT Bombay-associated organizations and Government College Solan for exemplary leadership, coordination, innovation, and commitment to academic excellence.

5) IGNOU Academic Counselor (Indira Gandhi National Open University). Empanelled as an **Academic Counselor** by **Indira Gandhi National Open University** (Regional Centre Shimla) for the **Bachelor of Science (BSCG) Programme** at IGNOU Study Centre 1103. Appointed to provide academic counseling, learner support, and academic guidance for undergraduate chemistry courses, including theory and practical components. Responsibilities included mentoring distance learners, facilitating academic engagement, supporting assignment evaluation processes, and contributing to quality assurance in open and distance learning

ACADEMIC RESEARCH LEADERSHIP & Ph.D. SUPERVISION

- Eligible Ph.D. Research Supervisor (Himachal Pradesh University) Formally cleared the statutory eligibility criteria to act as a recognized Doctoral Research Supervisor for the Ph.D. programme under Himachal Pradesh University (NAAC Accredited "A" Grade). Authorized to mentor research scholars and supervise advanced doctoral dissertations within the Faculty of Chemical Sciences, expanding institutional research capacity. *(Sanctioned via Office of the Dean of Studies, Letter No. 1-60/2024-HPU (DS) dated November 18, 2025).*

PROFICIENCY AND SKILLS:

Instruments: FT-IR Spectrophotometer, UV-Spectrophotometer, Density and sound velocity analyzer, Fluorescence and Cyclic Voltammeter, FESEM, XRD and HRTEM

Computer: ADSIT (Advanced Diploma in Software and Information Technology), Windows, Chem. Draw, Origin.

PERSONAL DETAILS:

Father's Name: Sh. Beli Ram.

Date of Birth: 30th December, 1984

Permanent Address: Dr. Ramesh Kumar
Village Dakech (Salogra).
P.O. Salogra, Tehsil & Distt.- Solan
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