## **CURRICULUM VITAE**

## Dr. Kashma

Assistant Professor of Chemistry

DAV College, Sector – 10, Chandigarh (India) 160011

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# **Professional Experience**

Total experience at different levels (Teaching & Research): 5.11 Years

Name of the Employer	Designation of the post	Duration of employment
DAV College, Sector – 10, Chandigarh	Assistant Professor, Department of Chemistry	20-04-2021 to till date
Institute of Forensic Science & Criminology, Panjab University Chandigarh	UGC Women Postdoctoral Research Fellow	20-07-2017 to 19-04- 2021
University of the Free State, South Africa	Post-doctoral Fellow, Department of Physics	01-09-2014 to 31-12- 2015

# **Educational Qualification**

Qualifications	University/Board	Subjects	Year of Passing	Division
Ph.D.	Shoolini University of Biotechnology and	,	2014	Awarded
	Management Sciences, Solan (H.P.)	(Polymer Science)		
M. Phil.	Shoolini University of Biotechnology and	Chemistry	2011	Awarded
	Management Sciences, Solan (H.P.)	(Polymer Science)		
M.Sc.	Panjab University, Chandigarh	Chemistry	2010	I
B. Sc. (Med.)	HP University, Shimla (H.P.)	Chemistry, Biology	2008	I

# **Research Publications**

S. No.	Type of publication & their status	No. of Publications
1.	Papers Published in Journals	29
2.	Conference Proceedings	01
3.	Patent	03 (filed)
4.	Books Edited	03 (+01 under progress)
5.	Book Chapters Published/Accepted/Submitted	11
6.	Total Impact Points	108 (Av. I.F. 4.0)
7.	h-index as per Scopus Database (Author ID: 55658056846)	14
8.	Total no. of Citation as per Scopus	626
9.	h-index as per Google Scholar 15 (i10-	
10.	Total no. of Citation as per Google Scholar	727

## Research Interest

Synthesis, Processing and Characterization of Bio-based/biodegradable Polymers and Composite; Drug Delivery Devices, Self-healing Hydrogels, Tissue Engineering, Waste-Water Treatment, Polymer Nanocomposites and Functional Polymers, Ion Solid Interaction.

# Research Projects (Completed/Ongoing)

I. Received grant-in-aid for the joint center project titled "Joint Center for generating tissue-engineered organs and controlling cell bhehaviour" to Raju Kumar Gupta, IIT Kanpur (Indian Nodal PI); Kartikey Verma, Vijay Kumar, Kashma Sharma; Ali Khademhosseini, Harvard-MIT Division of Health Sciences and Technology, Massachusetts Institute of Technology (MIT), Cambridge (U.S. Nodal PI) and Akhilesh K Gaharwar, Texas A&M University, College Station.

Funded by Indo-US Science and Technology Forum. (IUSSTF-JC-025-2016) (2017-2019) (Rs 49.81 Lakhs)

II. Principle Investigator of Research Project entitled "Nanohydroxyapatite composite scaffolds for bone tissue engineering".

Funded by University Grant Commission under Post-Doctoral Fellowship for Women for the year 2017-18. (PDFWM-2017-18-HIM-51703). (2017-2022

#### Honors/Awards

- Received Best Oral Presentation Award in a "Chemical Constellation Cheminar 2019" organized by Dr. B R Ambedkar National Institute of Technology, Jalandhar during October 12-13, 2019.
- Session Chaired in the National workshop on "Computer & Voice Forensics" organized by Institute of Forensic Science & Criminology Panjab University, Chandigarh during March 29, 2019.
- Received University Grants Commission *Post-Doctoral Fellowship to Women Candidates* (Reg. ID: PDFWM-2017-18-HIM-51703) (2017).
- Grant-in-aid for the joint center project titled "Joint Center for generating tissue-engineered organs and controlling cell behavior" to Dr. Raju Gupta, Assistant Professor, Department of Chemical Engineering, Indian Institute of Technology, Kanpur (Indian Nodal PI) and Prof Ali Khademhosseini, Harvard-MIT Division of Health Sciences and Technology, Massachusetts Institute of Technology (MIT), Cambridge, MA (U.S. Nodal PI) under Indo-U.S. Joint R&D Networked Center. Among all other partners, I am one of the partners in the joint center. Funded by Indo-US Science and Technology Forum. (IUSSTF-JC-025-2016) (2017- 2020) (Rs 49.81 Lakhs).
- Received Postdoctoral fellowship (Sarchi Chair) from the University of the Free State, South Africa.
- Visiting Researcher for the period of one year in Department of Physics, University of the Free State, Bloemfontein South Africa in 2013.
- Received Best Oral Presentation Award in a National Conference on "Innovation in Engineering, Pharmaceutical, Legal and Management Sciences (IEPLMS 2014)" at Bahra University, Shimla Hills during May 30, 2011.

• Life time Member of the Him Science Congress Association (H.P.)

#### **Patent Filed**

i. Title: Biodegradable packaging film and a process for its preparation thereof.

Inventors: Vishal Sharma, Kashma Sharma, Vijay Kumar, Sonal Chaudhary.

Indian Patent Application No.: 202111018921 (Filed on: 23/04/2021)

ii. Title: Graphene oxide based solar tiles for maintaining consistent home temperature.

Inventors: R. P Joshi, H. S Dhami, P. Kumar, A. Pandey, R. Singhal, Shipra, B. C. Joshi, Vijay Kumar, **Kashma Sharma**, K. Pandey. Reference No.: 201911017675 (Filed on: 03/05/2019)

iii. Title: Graphene oxide based Li ion/ Li sulphur battery with replaceable electrodes.

**Inventors:** R. P. Joshi, H. S Dhami, A. Pandey, P. Kumar, B. P. Joshi, Vijay Kumar, **Kashma Sharma**, V. Sharma, S. Sharma, V. Mehta.

Reference No.: 201911019351 (Filed on: 15/05/2019)

#### **Books Edited**

- 1. Editors: S. K. Tiwari, **Kashma Sharma**, V. Sharma, Vijay Kumar, Electrospun Nanofibers: Fabrication, Functionalisation and Applications, *Publisher: Springer International Publishing AG Switzerland*, eBook ISBN: 978-3-030-79979-3 (2021). <a href="https://doi.org/10.1007/978-3-030-79979-3">https://doi.org/10.1007/978-3-030-79979-3</a>
- 2. Editors: Vijay Kumar, **Kashma Sharma**, Rakesh Sehgal, Susheel Kalia, Conjugated Polymers for Next Generation of Photovoltaics, Energy Storage and Electronics, Vol I. *Publisher: Elsevier*, Paperback ISBN: 9780128234426 (2022). <a href="https://www.elsevier.com/books/conjugated-polymers-for-next-generation-applications-volume-1/kumar/978-0-12-823442-6">https://www.elsevier.com/books/conjugated-polymers-for-next-generation-applications-volume-1/kumar/978-0-12-823442-6</a>
- 3. Editors: Vijay Kumar, **Kashma Sharma**, Rakesh Sehgal, Susheel Kalia, Conjugated Polymers for Next Generation of Photovoltaics, Energy Storage and Electronics, Vol II. *Publisher: Elsevier*, Paperback ISBN: 9780128240946 (2022). <a href="https://www.elsevier.com/books/conjugated-polymers-for-next-generation-applications-volume-2/kumar/978-0-12-824094-6">https://www.elsevier.com/books/conjugated-polymers-for-next-generation-applications-volume-2/kumar/978-0-12-824094-6</a>
- 4. Editors: **Kashma Sharma**, Santosh Kumar Tiwari, **Vijay Kumar**, Susheel Kalia, Novel Bionanocomposites for Emerging Biomedical Technologies. Publisher: Springer (*Book proposal accepted*).

### Scientific Publications

# Refereed journal publications.

#### Published from DAV College (2021-)

- 1. V. Sharma, S. Choudhary, P. Mankotia, A. Kumari, **Kashma Sharma**, Rakesh Sehgal, Vijay Kumar, Nanoparticles as Fingermark Sensors, *TrAC Trends in Analytical Chemistry* 143 (2021) 116378. (I.F. = 12.296)
- 2. Sonal Choudhary, **Kashma Sharma**, Manpreet S. Bhatti, Vishal Sharma, Vijay Kumar, DOE based synthesis of Gellan gum-acrylic acid-based biodegradable hydrogels: Screening of

- significant process variable and in situ field studies, *RSC Advances* 12 (2022) 4780-4794. (I.F. = 3.361)
- 3. Karanpreet Virk, **Kashma Sharma**, Shikha Kapil, Vinod Kumar, Vishal Sharma, Sadanand Pandey, Vijay Kumar, Synthesis of gum acacia-silver nanoparticles based hydrogel composites and their comparative anti-bacterial activity, *Journal of Polymer Research* 29 (2022) 118.
- 4. Archana Gupta, Vishal Sharma, **Kashma Sharma**, Vijay Kumar, Sonal Choudhary, Priyanka Mankotia, Brajesh Kumar, Harshita Mishra, Amitava Moulick, Adam Ekielski and Pawan Kumar Mishra, A Review of Adsorbents for Heavy Metal Decontamination: Growing Approach to Wastewater Treatment, *Materials* 14 (2021) 4702. (I.F. = 3.623)
- 5. **Kashma Sharma**, Shreya Sharma, Vipasha Sharma, Pawan Kumar Mishra, Adam Ekielski, Vishal Sharma, Vijay Kumar, Methylene Blue Dye Adsorption from Wastewater Using Hydroxyapatite/Gold Nanoparticles Composites: Kinetic and Thermodynamics Studies, *Nanomaterials* 11 (2021) 1403. (I.F. = 5.076)

#### Published before April 2021

- 6. R. Chauhan, R. Kumar, Vijay Kumar, **Kashma Sharma**, V. Sharma, On the discrimination of soil samples by derivative diffuse reflectance UV-Vis-NIR spectroscopy and Chemometric methods, *Forensic Science International* 319 (2021) 110655. (I.F. = 2.395)
- 7. **Kashma Sharma**, S. Sharma, S. Thapa, M. Bhagat, Vijay Kumar, V. Sharma, Nanohydroxyapatite-, Gelatin-, and Acrylic Acid-Based Novel Dental Restorative Material, *ACS Omega* 5 (2020) 27886-27895. (I.F. = 3.512)
- 8. S. Sharma, K. Virk, **Kashma Sharma**, S. K. Bose, Vijay Kumar, V. Sharma, M. L. Focarete, S. Kalia, "Preparation of gum acacia-poly(acrylamide-IPN-acrylic acid) based nanocomposite hydrogels via polymerization methods for antimicrobial applications", *Journal of Molecular Structure* 1215 (2020) 128298. (I.F. = 3.196)
- 9. P. Mankotia, S. Choudhary, **Kashma Sharma**, Vijay Kumar, J. K. Bhatia, A. Parmar, S. Sharma, V. Sharma<sup>‡</sup>, "Neem gum based pH responsive hydrogel matrix: A new pharmaceutical excipient for the sustained release of anticancer drug", *International Journal of Biological Macromolecules* 142 (2020) 742-755. (I.F. = 6.953)
- 10. S. Choudhary, **Kashma Sharma**, Vijay Kumar, J. K. Bhatia, S. Sharma, V. Sharma, "Microwave-Assisted Synthesis of Gum Gellan-cl-poly (acrylic-co- methacrylic acid) Hydrogel for Cationic Dyes Removal", *Polymer Bulletin* 77 (2019) 4917-4935. (I.F. = 2.870).
- 11. R. Kumar, A. Kaur, **Kashma Sharma**, B. Kumar, V. Sharma, "On the examination of raw, pasteurized, powdered, and adulterated milk samples and their multivariate classification: applications in food and forensic science", Spectroscopy Letters 52 (2019) 583-598. (I.F. = 1.179)
- 12. V. Hasija, **Kashma Sharma**, Vijay Kumar, S. Sharma, V. Sharma, "Green synthesis of agar/Gum Arabic based superabsorbent as an alternative for irrigation in Agriculture", *Vacuum* 157 (2018) 458-464. (I.F. = 3.627)
- 13. Kashma Sharma, Vijay Kumar, C. Swart-Pistor, B. Chaudhary, H. C. Swart,

- "Synthesis, characterization and anti-microbial activity of a novel superabsorbent based on agar-poly (methacrylic acid-glycine)", *Journal of Bioactive and Compatible Polymers* 32(1) (2017) 74-91. (I.F. = 1.756)
- 14. **Kashma Sharma**, Vijay Kumar, V. Kumar, H. C. Swart, "Advances in phosphors based on organic materials for solid state lighting applications", *Physica B: Condensed Matter* 480 (2016) 105-110. (I.F. = 2.436)
- 15. **Kashma Sharma**, Vijay Kumar, B. S. Kaith, S. Som, V. Kumar, A. Pandey, S. Kalia, H. C. Swart, "Synthesis of biodegradable Gum ghatti based poly(methacrylic acid-aniline) conducting IPN hydrogel for controlled release of amoxicilin trihydrate", *Industrial & Engineering Chemistry Research* 54 (2015) 1982-1991. (I.F. = 3.72)
- 16. **Kashma Sharma**, Vijay Kumar, B. S. Kaith, V. Kumar, S. Som, A. Pandey, S. Kalia, H. C. Swart, "Evaluation of a conducting interpenetrating network based on Gum ghattig-poly(acrylic acid-aniline) as a colon-specific delivery system for amoxicilin trihydrate and paracetamol", *New Journal of Chemistry* 39 (2015) 3021-3034. (I.F. = 3.591)
- 17. **Kashma Sharma**, Vijay Kumar, B. S. Kaith, V. Kumar, S. Som, S. Kalia, H. C. Swart, "Synthesis, characterization and water retention study of biodegradable gum ghattipoly(acrylic acid-aniline) hydrogels", *Polymer Degradation and Stability* 111 (2015) 20-31. (I.F. = 5.03)
- 18. B. S. Kaith, R. Sharma, **Kashma Sharma**, S. Choudhary, Vijay Kumar, S. P. Lochab, "Effects of O7+ and Ni9+ swift heavy ions on polyacrylamide grafted Gum acacia thin film and sorption of methylene blue", *Vacuum* 111 (2015) 73-82. (I.F. = 3.627)
- 19. **Kashma Sharma**, B. S. Kaith, S. Kalia, Vijay Kumar, H. C. Swart, "Gum ghatti based biodegradable and conductive carriers for colon-specific drug delivery", *Colloid and Polymer Science* 293 (2015) 1181-1190. (I.F. = 1.931)
- 20. **Kashma Sharma**, B. S. Kaith, Vijay Kumar, S. Kalia, V. Kumar, H. C. Swart, "Water rentention and dyes adsorption behaviour of Gg-cl-poly(acrylic-aniline) based conducting hydrogels", *Geoderma* 232-234 (2014) 45-55. (I.F. = 6.114)
- 21. **Kashma Sharma**, Vijay Kumar, B. S. Kaith, V. Kumar, S. Som, S. Kalia, H. C. Swart, "A study of biodegradation behaviour of poly(methacrylic acid/aniline) grafted gum ghatti by a soil burial method", *RSC Advances* 4 (2014) 25637. (I.F. = 3.361)
- 22. **Kashma Sharma**, B. S. Kaith, Vijay Kumar, S. Kalia, V. Kumar, H. C. Swart, "Synthesis and biodegradation studies of gamma irradiated electrically conductive hydrogels", *Polymer Degradation and Stability* 107 (2014) 166-177. (I.F. = 5.03)
- 23. B. S. Kaith, **Kashma Sharma**, Vijay Kumar, S. Kalia, H. C Swart, "Fabrication and characterization of gum ghatti-polymethacrylic acid based electrically conductive hydrogels", *Synthetic Metals* 187 (2014) 61-67. (I.F. = 3.266)
- 24. **Kashma Sharma**, B. S. Kaith, Vijay Kumar, S. Kalia, V. Kumar, S. Som, H. C Swart, "Gum ghatti based novel electrically conductive biomaterials: A study of conductivity and surface morphology", *eXPRESS Polymer Letters* 8 (2014) 267-281. (I.F. = 4.161)
- 25. Vijay Kumar, Y. Ali, **Kashma Sharma**, V. Kumar, R. G. Sonkawade, A. S. Dhaliwal, H. C. Swart, "Swift heavy ions induced surface modifications in Ag-polypyrrole composite films synthesized by electrochemical route", *Nuclear Instrument and Methods in Physics Research B* 323 (2014) 7-13. (I.F. = 1.377)

- 26. B. S. Kaith, **Kashma Sharma**, Vijay Kumar, V. Kumar, H. C. Swart, S. Kalia, "Effects of swift heavy ion irradiation on the structural and morphological properties of poly(methacrylic acid) cross linked gum ghatti", *Vacuum* 101 (2014) 166-170. [*Rapid Communication*]. (I.F. = 3.627)
- 27. **Kashma Sharma**, B. S. Kaith, Vijay Kumar, V. Kumar, S. Kalia, B. K. Kapur, H. C. Swart, "A comparative study of the effect of Ni<sup>9+</sup> and Au<sup>9+</sup> ion beams on poly(methacrylic acid) grafted gum ghatti films", *Radiation Physics and Chemistry* 97 (2014) 253-261. (I.F. = 2.858)
- 28. **Kashma Sharma**, B. S. Kaith, Vijay Kumar, V. Kumar, S. Som, S. Kalia, H. C. Swart, "Synthesis and properties of poly(acrylamide-aniline)-grafted gum ghatti based nanospikes", *RSC Advances* 3 (2013) 25830-25839. (I.F. = 3.361)
- 29. Y. Ali, **Kashma Sharma**, Vijay Kumar, R. G. Sonkawade, A. S. Dhaliwal, "Polypyrrole microspheroidals decorated with Ag nanostructures: Synthesis and their characterization", *Applied Surface Science* 280 (2013) 950-956. (I.F. = 6.707)

# Papers Published in Peer Reviewed Conference Proceedings

30. **Kashma Sharma**, Karanpreet Virk, Vijay Kumar, S. K. Sharma, Vishal Sharma, "Preparation and Characterizations Graft Copolymer of Poly(acrylamide-aniline)-Grafted Gum Ghatti", *Materials Today: Proceedings* 21 (2020) 1856-1861.

#### **Papers Communicated**

- 31. Sukhbir Kaur, **Kashma Sharma**, Sonal Choudhary, Shweta Sharma, Vishal Sharma, Vijay Kumar, "An NPK fertilizer based Superabsorbent Composite: An efficient, biodegradable and cost-effective tool for Agricultural Sustainability", *Polymer Bulletin* (Submitted).
- 32. Sonal Choudhary, **Kashma Sharma**, Sourbh Tahkur, Vishal Sharma, Vijay Kumar, "Screening and RSM optimization for the synthesis of Gum gellan/Dextrin based hybrid hydrogel for the effective removal of malachite green dye: Adsorption isotherm and kinetics studies", *Scientific Reports* (Submitted).

#### **Book Chapters**

- 1. **Sharma K.**, Kumar V., Kaith B.S., Kalia S., Swart H.C. (2017) Conducting Polymer Hydrogels and Their Applications. In: Kumar V., Kalia S., Swart H. (eds) Conducting Polymer Hybrids. Springer Series on Polymer and Composite Materials. Springer, Cham. <a href="https://doi.org/10.1007/978-3-319-46458-9\_7">https://doi.org/10.1007/978-3-319-46458-9\_7</a>
- 2. **Sharma K.**, Sharma V., Kumar V. (2019) Synthesis of Hydrogels by Modification of Natural Polysaccharides Through Radiation Cross-Linking Polymerization for Use in Drug Delivery. In: Kumar V., Chaudhary B., Sharma V., Verma K. (eds) Radiation Effects in Polymeric Materials. Springer Series on Polymer and Composite Materials. Springer, Cham. <a href="https://doi.org/10.1007/978-3-030-05770-1">https://doi.org/10.1007/978-3-030-05770-1</a> 8
- 3. Choudhary S., **Sharma K.**, Sharma V., Kumar V. (2020) Grafting Polymers. In: Gutiérrez T.J. (eds) Reactive and Functional Polymers Volume Two. Springer, Cham. <a href="https://doi.org/10.1007/978-3-030-45135-6">https://doi.org/10.1007/978-3-030-45135-6</a> 8
- 4. Mankotia P., **Sharma K.**, Sharma V., Kumar V. (2020) Interpenetrating Polymer Networks in Sustained Drug-Releasing. In: Nayak A., Hasnain M. (eds) Advanced Biopolymeric

- Systems for Drug Delivery. Advances in Material Research and Technology. Springer, Cham. <a href="https://doi.org/10.1007/978-3-030-46923-8">https://doi.org/10.1007/978-3-030-46923-8</a> 9
- 5. Nath J., **Sharma K.**, Kumar S., Sharma V., **Kumar V.**, Sehgal R. (2021) Electrospun Nanofibers for Wastewater Treatment. In: Tiwari S.K., Sharma K., Sharma V., Kumar V. (eds) Electrospun Nanofibers. Springer Series on Polymer and Composite Materials. Springer, Cham. <a href="https://doi.org/10.1007/978-3-030-79979-3\_4">https://doi.org/10.1007/978-3-030-79979-3\_4</a>
- Mankotia P., Sharma K., Sharma V., Sehgal R., Kumar V. (2021) Polymer and Ceramic-Based Hollow Nanofibers via Electrospinning. In: Tiwari S.K., Sharma K., Sharma V., Kumar V. (eds) Electrospun Nanofibers. Springer Series on Polymer and Composite Materials. Springer, Cham. <a href="https://doi.org/10.1007/978-3-030-79979-3">https://doi.org/10.1007/978-3-030-79979-3</a> 9
- 7. Nath J., **Sharma K.**, Kumar S., Kumar V., Sehgal R. (2022) Polymer/Carbon Nanocomposites for Biomedical Applications. In: Hasnain M.S., Nayak A.K., Alkahtani S. (eds) Polymeric and Natural Composites. Advances in Material Research and Technology. Springer, Cham. <a href="https://doi.org/10.1007/978-3-030-70266-3">https://doi.org/10.1007/978-3-030-70266-3</a> 4
- 8. Choudhary, S., **Sharma, K.**, Sharma, V., Kumar, V., Sehgal, R. (2022). Marine Collagen for Delivery of Therapeutics. In: Jana, S., Jana, S. (eds) Marine Biomaterials. Springer, Singapore. <a href="https://doi.org/10.1007/978-981-16-5374-2">https://doi.org/10.1007/978-981-16-5374-2</a> 4
- 9. Priyanka Mankotia, Kartikey Verma, **Kashma Sharma**, Vishal Sharma, Vijay Kumar, Rakesh Sehgal, Mass Spectroscopy in Biomedical Nanotechnology, Ajeet Kaushik, Sesha S. Srinivasan, Yogendra Kumar Mishra (Eds.) Analytical Techniques for Biomedical Nanotechnology. Institute of Physics (IOP). (**Accepted**)
- 10. Urba Afnan, **Kashma Sharma**, Rakesh Sehgal, Vijay Kumar, Xanthan gum-based Nanocarriers for Therapeutic delivery. Amit Kumar Nayak, Md Saquib Hasnain, Tejraj M. Aminabhavi (Eds.) Theranostic Nanosystems; (Vol. I: Polymeric nanosystems. Elsevier. (**Accepted**)
- 11. Priyanka Mankotia, **Kashma Sharma**, Vishal Sharma, Rakesh Sehgal, Vijay Kumar, Inorganic Bionancomposites for Bone Tissue Engineering, Dr. Amit Kumar Nayak, Dr. Md Saquib Hasnain, Dr. Tejraj M. Aminabhavi (Eds.) Theranostic Nanosystems; (Vol. I: Polymeric nanosystems. Elsevier. (**Accepted**)

### Ph.D. Supervision

S. No.	Student Name	Uni./ Institute	Status	Role
1.	Shabnum Saleem	CT University Jalandhar	Ongoing	Co-supervisor
2.	Kibriya Farooq	CT University Jalandhar	Ongoing	Co-supervisor

## Mentoring Experience & Students Mentored

Mentored 08 MSc. Forensic Science dissertations (02 PG students in 2018, 04 PG students in 2019, and 02 students in 2020) in Institute of Forensic Science & Criminology, Panjab University, Chandigarh.

## **Teaching Experience**

 Taught Ph.D. course work (Research Methodology) in sessions Sept 2019 – Jan 2020 and Sept. 2020 – Jan 2021 in Institute of Forensic Science & Criminology, Panjab University, Chandigarh.

- Taught chemical science to MSc. Forensic Science students during 2018 -2020 in Institute of Forensic Science & Criminology, Panjab University, Chandigarh.
- Experience of teaching Polymer Chemistry for 1 year at Shoolini University of Biotechnology and Management Science during M.Phil.

#### Reviewer (Journals)

RSC Advances; New Journal of Chemistry, Carbohydrate Polymers; International Journal of Biological Macromolecules; Vacuum; Iranian Polymer Journal, Pharmaceutics, MDPI Polymers, Journal of Drug Delivery Science and Technology.

# Conferences/ Workshops/ Seminars Attended

- 1. Attended TEQIP III Sponsored One Week Short Term Course (Through Online Mode) on "Recent Advances in Nanoscience and Nanotechnology (RANN-2020)" held at National Institute of Technology Srinagar during 24-28 August 2020.
- 2. Attended a Faculty Development Programme (Through Online Mode) On MOOCs: Instructional Design, Development and Learning Analytics during April 4-9, 2020 Organized by Centre for Academic Leadership and Education Management (CALEM), Panjab University, Chandigarh.
- 3. National seminar cum workshop on "Academic integrity, plagiarism and Intellectual Property Rights" organized by CALEM under the aegis of PMMMNMTT, MHRD, GOI in collaboration with Department of Chemistry & Institute of Forensic science & criminology, Panjab University, Chandīgarh during December 23-24, 2019
- 4. International Conference on "Chemical Constellation Cheminar 2019" organized by Dr. B R Ambedkar National Institute of Technology, Jalandhar during October 12-13, 2019. Oral Presentation.
- 5. Attended TEQIP III Sponsored short term course on "Materials Characterization Techniques" organized by Department of Physics, National Institute of Technology Srinagar during 24-28 June 2019.
- 6. National workshop on **"Computer & Voice Forensics"** organised by Institute of Forensic Science & Criminology Panjab University, Chandigarh during March 29, 2019.
- 7. *6th* South African Conference on Photonic Materials, Mabula Game Lodge in South Africa during 5-7 May 2015.
- 8. Second annual national conference on "Science Emerging Scenario and Future Challenges-2014" organized by Him Science Congress Association, Shimla during May 17-18, 2014.
- 9. One-day National conference on "Innovation in Engineering, Pharmaceutical, Legal and Management Sciences" Bahra University, Shimla hills during May 30, 2014. Oral Presentation.
- 10. International Conference on "Structural and Physical Properties of Solids (SPPS-2013)" Department of Applied Physics, Indian School of Mines, Dhanbad, India during 18-20 November 2013. Oral Presentation.

- 11. National Conference on "Material Science-Applications in Energy & Environment" DAV College Jalandhar (Pb.) during 2-3 March 2012.
- 12. International Conference on "Radiation Environment-Assessment, Measurement and its Impact (RADENVIRON-2012)"\_Babasaheb Bhimrao Ambedkar University, Lucknow during April 12-14, 2012.
- 13. International Conference on *"Chemical Constellation Cheminar 2012"* Dr. B R Ambedkar National Institute of Technology, Jalandhar during September 10-12, 2012.
- 14. UGC Sponsored National Seminar on "Chemistry in Our Lives" organized by Sanatan Dharma College (Lahore), Ambala Cantt during March 23, 2011.
- 15. Seven days National Workshop Cum Seminar on "Advances in Electron Microscopy & Allied Fields" Organized by Department of Chemistry, Shoolini University, Solan during 23-29 September 2011.
- 16. 2<sup>nd</sup> National Conference on "Advanced Materials and Radiation Physics (AMRP-2011)" Sant Longowal Institute of Engineering and Technology (SLIET), Longowal during 4-5 November 2011.
- 17. Two days National Conference on "Accelerator and Low-Level Radiation Safety (NCALLRS-2009)" Organized by Inter University accelerator Centre (IUAC), New Delhi during November 18-20, 2009.