

**MIRANDA HOUSE  
UNIVERSITY OF DELHI  
DBT Star College Project**

**Publication profile of the faculty members/ Student Publications in Peer Reviewed Journals**

**International**

- Tripathi, M. K., Kumar, M., Deepali, Asthana, R. K. & Nigam, S. 2017. Proteomic analysis of sensitive and resistant isolates of *Escherichia coli* in understanding target(s) of a cyanobacterial biomolecule hapalindole-T. Journal of Aquaculture Research & Development (accepted).
- Sharma, M., Pathak, M., Ojha, H. & Roy, B. 2017. Green synthesis of gold nanoparticles using *Cinnamomum verum*, *Syzygium aromaticum* and *Piper nigrum* extract. Asian Journal of Chemistry 29(8):1693-1696.
- Pathak, M., Ojha, H., Tiwari, A. K, Sharma, D., Saini, M. & Kakkar, R. 2017. Design, synthesis and biological evaluation of antimalarial activity of new derivatives of 2,4,6-s-triazine. Chemistry Central Journal. 11:132.
- Pasricha, S., Sharma, D., Ojha, H., Gahlot, P., Pathak, M., Basu, M., Chawla, R., Singhal, S., Singh, A., Goel, R., Kukreti, S. & Shukla, S. 2017. Luminescence, circular dichroism and *in silico* studies of binding interaction of synthesized naphthylchalcone derivatives with bovine serum albumin. Luminescence.32:1252–1262.
- Tyagi, P., Tyagi, M., Agrawal, S., Chandra, S., Ojha, H. & Pathak, M. 2017. Synthesis, characterization of 1, 2, 4-triazole Schiff base derived 3d-metal complexes: Induces cytotoxicity in HepG2, MCF-7 cell line, BSA binding fluorescence and DFT study. Spectrochimica Acta Part A: Molecular and Biomolecular Spectroscopy 171 : 246-257.
- Saini, K., Rani, N., Ekta, Mahajan, D., Satyabola, D. & Gupta, N. 2017. Green synthesis of ZnO nanoparticles by using *Azadirachta indica* and their photocatalytic, anti-bacterial, anti-fungal and anti-diabetic activity. In: Proceedings of European Advanced Materials Congress-2017, Stockholm, Sweden, 22-24 August 2017.
- Saini, K., Joseph, F., Ramanan, A. & Bhatia, S.S. 2017. Electrochemical synthesis of oxalate-linked copper (II) metal organic frameworks: X-ray crystallographic structure and its magnetic properties. Materials Today: Proceedings 4: 9616–9621.
- Saini, K., Ingole, P.P., Bhatia, S.S. & Rani, N. 2018. Rod-shaped copper (Cu, Cu<sub>2</sub>O) nano catalyst for the facile oxidation of methanol, VBRI Press.Advance Material Letters 9: 36-41, ISSN: 0976-3961.
- Kandasamy, G. L., Sudame, A., Luthera, T., Saini, K. & Maity, D. 2018. Synthesis of hydrophilic and surface-functionalized superparamagnetic iron oxide nanoparticles for magnetic fluid hyperthermia application in liver cancer treatment. ACS Journal, Applied Materials & Interfaces, Manuscript ID: am-2018-01673j.
- Gorobets, N.Y., Sedash, Y. V., Singh, B. K., Poonam & Rathi, B. 2017. An overview of currently available antimalarials. Current Topics in Medicinal Chemistry 17: 1-14.
- Rathi, B., Feletrov, Y., Latha, N., Poonam & Vladimir, S. 2017. New avenues in controlling infectious diseases, Bentham Science Publishers. Current Topics in Medicinal Chemistry 17: 18.

- Rathi B. & Poonam. 2017. Special issue: Infectious Diseases. Chemical Biology Letters 4: 1-8, Integrated Science.
- Poonam. 2017. Indian and Western Aspects of Identity, Shree Kala Prakashan, Delhi (ed Prof. G. Singh), Current Scenario of Malarial Chemotherapeutics, pp. 146-156, ISBN: 978-9385329-21-0.
- Singh, H., Rajeswari, M. & Khurana, J. M. 2018. Synthesis, photophysical studies, and application of novel 2,7-bis(1-butyl-1-Hydrogen-1,2,3-triazole-4-yl)methoxy)naphthalene as a highly selective, reversible fluorescence chemosensor for detection of Fe<sup>3+</sup> ions. Journal of Photochemistry and Photobiology A: Chemistry. 353: 424–432.
- Singh, S., Singh, S., Tiwari, A. K., Sharma, R. K., Mathur, R. & Kaul, A.A. 2018. Novel <sup>18</sup>F Labelled Imidazo-oxazolopyridine derivative as  $\beta$ -Amyloid imaging agent: synthesis and preliminary evaluation. Asian Journal of Chemistry 30:183-190.
- Parveen, F., Patra, T. & Upadhyayula, S. 2018. A structure activity relationship study using DFT analysis of Bronsted Lewis acidic ionic liquids and synergistic effect of dual acidity in one-pot conversion of glucose to value-added chemicals. New Journal of Chemistry 42: 1423-1430.
- Kumar, K., Parveen, F., Patra, T. & Upadhyayula, S. 2018. Hydrothermal conversion of glucose to Levulinic Acid using multifunctional ionic liquids-effect of metal ion co-catalysts on product yield. New Journal of Chemistry 42: 228-236.
- Patra, T., Afreen, G., Parveen, F., Bahri, S., Kumar, K., Kondamudi, K. & Upadhyayula, S. 2018. Synergistic Bronsted-Lewis acidity effect on upgrading biomass-derived phenolic compounds: statistical optimization of process parameters, kinetic investigations and DFT study. Chemistry Select 3: 634-647.
- Thareja, V., James, A., Singh, R., Naorem, A.S., Pandey, M., Khan, Z., Sensharma, S. & Mohapatra, S. 2017. Overwintering sites and strategies of *Culex quinquefasciatus* (Diptera: Culicidae) larvae and impact of neem seed kernel aqueous suspension (NSKAS) and other eco-friendly tools on them. International Journal of Mosquito Research IJMR 4(2): 135-141. ISSN: 2348-5906.
- Arora, J., Agarwal, P. & Gupta, G. 2017. Rainbow of natural dyes on textiles using plants extracts: sustainable and eco-friendly processes. Green and Sustainable Chemistry 7: 35-47.
- Saraav, I., Pandey, K., Singh, S., Sharma, M. & Sharma, S. 2017. *Mycobacterium tuberculosis* MymA is a TLR2 agonist that activate macrophages and a TH1 response. Tuberculosis 106:16-24.
- Saraav, I., Pandey, K., Misra, R., Singh, S., Sharma, M. & Sharma, S. 2017. Characterization of MymA protein as a flavin-containing monooxygenase and as a target of isoniazid. Chemical Biology & Drug Design 89(1):152–160.
- Mishra, R., Das, M.K., Singh, S., Sharma, R.S., Sharma, S. & Mishra, V. 2017. Articulin-D induces apoptosis via activation of caspase-8 in acute T-cell leukemia cell line. Molecular and Cellular Biochemistry 426(1): 87-99.
- Mishra, R., Sharma, S., Sharma, R.S., Singh, S., Sardesai, M.M., Sharma, S., & Mishra, V. 2018. *Viscum articulatum* Burm. f. aqueous extract exerts antiproliferative effect and induces cell cycle arrest and apoptosis in leukemia cells. Journal of Ethnopharmacology (accepted).
- Singh, S., Sharma, M., Chaudhary, A. and Sharma, S. 2019. Rv2626c and Rv2032 activate TH1 response along with down regulation of regulatory T cells in peripheral blood mononuclear cells of tuberculosis patient. Comparative Immunology, Microbiology and Infectious Diseases 62: 46–53.

- Pandey, K., Singh, S., Parul, Medha, Sharma, M., Chaudhary, A. and Sharma, S. 2019. DosR proteins of *Mycobacterium tuberculosis* upregulate effector T cells and down regulate T regulatory cells in TB patients and their healthy contacts. *Microbial Pathogenesis* 126 : 399–406.
- Shakya, R. and Bhatla, S.C. 2018. Pollination, Fertilization and Seed Development. In: *Plant Physiology, Development and Metabolism*, Bhatla, S.C. & Lal, M. A.(ed), Springer Singapore, pp.821-856 (ISBN 978-981-13-2023-1).
- Shakya, R. and Lal, M.A. 2018. Photoassimilate Translocation. In: *Plant Physiology, Development and Metabolism*, Bhatla, S.C. & Lal, M. A. (ed), Springer Singapore, pp.227-251 (ISBN 978-981-13-2023-1).
- Lal, M.A., Kathpalia, R., Sisodiya, R. R. and Shakya and R. 2018. Biotic Stress. In: *Plant Physiology, Development and Metabolism*, Bhatla, S.C. & Lal, M. A. (ed), Springer Singapore, pp.1029-1095, (ISBN 978-981-13-2023-1).
- Shakya, R. and Lal, M.A. 2018. Fruit Development and Ripening. In: *Plant Physiology, Development and Metabolism*, Bhatla, S.C. & Lal, M. A. (ed), Springer Singapore, pp.857-883, (ISBN 978-981-13-2023-1).
- Pathak, M., Sharma, D., Sharma, M. and Sharma, N.(2018).Spectroscopic and thermodynamic studies of the binding mechanism of metformin to pepsin. *J. Mol. Structure*. 1166: 183-189.
- Sharma, M., Pathak, M. and Kapoor, P.N. (2018). The Sol-Gel Method: Pathway to ultrapure and homogeneous Mixed Metal Oxide Nanoparticles: A Review. *Asian J. Chem.*30(7):1405-1412.
- Jolly, P., Physware: A Collaborative Initiative for Strengthening Physics Education and Promoting Active Learning in the Developing World. *Scientia in education* 8(Special Issue), 2017 P. 59-78; ISSN 1804-7106
- Development of a microfluidic electrochemical biosensor: Prospect for point-of-care cholesterol monitoring”, Gurpreet Kaur, Monika Tomar and Vinay Gupta, *Sensors and Actuator B*, 261 (2018) 460-466
- Tunable nanostructured columnar growth of SnO<sub>2</sub> for efficient detection of CO gas”, Avneet Singh, Anjali Sharma, Monika Tomar and Vinay Gupta, *Nanotechnology*, 29(6) (2018) 065502
- ZnO/ST-Quartz SAW Resonator: An efficient NO<sub>2</sub> gas sensor”, Lokesh Rana, Reema Gupta, Monika Tomar and Vinay Gupta, *Sensors and Actuator B*, 252 (2017) 840-845.

## National

- Moitra, S., Bahri, S. & Sinha Roy, S. 2018. My city, my Delhi-biomedical waste. In: *Environment and Sustainable Development A Geographical Appraisal* (ed S. Sahdev and M. Kumar). Concept Publishing Company Pvt. Ltd., New Delhi, pp. 18-24. ISBN 13:978-93-5125-189-7.
- Deepali. 2017. Cyanobacteria. In: *Biofertilizer and Biocontrol Agent for Organic Farming* (ed R. Khosla), Kojo Publication, India, pp. 28-39.
- Subramanyan, J. 2017. Purslane-a precious medicinal weed. *Journal of Agricultural Engineering and Food Technology (JAEFT)* 4 (1): 89-90.
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- Jit, S. & Kaur, J. 2017. Cell-cell adhesion and communication: Cell-cell and cell matrix adhesion. E-lesson for National Mission on Education Information Communication Technology in Zoology under MHRD Project.
- Kaur, J. & Jit, S. 2019. Natural Selection and Climate Change. TROP ICSU Project supported by the International Science Council. <https://tropicsu.org/lesson-plan-natural-selection> 2019.
- Sharma S. 2019. Protein: the quintessential nutrient. Food and Beverage Business Review 16(6).
- Bahri, S., Subramanyan, J., Akilandeshwari, P.A., Devi, K., Kashiv, P., Jha, P., Yadav, S. and Chandra Sekhar, V. J.S.D.A. 2018. Morphogenetic studies on cowpea cotyledons. In: Introduction to Challenges and Strategies to Improve Crop Productivity in Changing Environment, Ansari, M.W., Kumar, S., Kaula, B.C. & Wattal, R.K. (ed), Enriched Publications Pvt. Ltd., Delhi, pp.161-168 (ISBN No. 978-81-934634-9-9).
- Sella, N., Manchanda, D., Gupta, I., Bundela, P., Bansal, S., Aggarwal, S., Roy, B., Verma, M., Jolly, P. and Subramanyan, J. 2018. Use of the smartphone as a handy colorimeter. DU Journal of Undergraduate Research and Innovation 3(2):56-63.

### **Publications in Seminars/Conferences/Workshops Proceedings (2018-19)**

#### **International**

- Sharma M., Sharma S. 2019 *Mycobacterium tuberculosis* latency associated protein Rv2628 targeting host mitochondria may have role in persistence of pathogen at the A3 Tuberculosis: Mechanisms, Pathogenesis and Treatment conference held at Banff, Alberta, Canada, 17 – 21 January 2019.
- Sharma M., Sharma S 2018. DosR Proteins Rv2627 and Rv2728 of *Mycobacterium tuberculosis* induce IFN  $\gamma$  and downregulate T regulatory cells in TB infected individuals and their healthy contact 12th Vaccine Congress Organized by Elsevier, Budapest, Hungary; 16-19 September 2018.
- Gupta, Y., Singh, A., Sharma, M. and Sharma, S. 2019. Assessment of Immunogenicity of M.TB Rv 2389c GENE product by insilico analysis. 6th World Congress on Nanomedical Sciences, Vigyan Bhawan, Delhi, India, 07-10 January 2019

#### **National**

- Medha, Bhatt, P., Sharma, S., Sharma, M. and Chaudhary, A. 2018. Validation of immunoinformatic approach to identify *Mycobacterium tuberculosis* late stage specific CD4 and CD8 epitopes for their vaccine candidature” Annual Meeting of Indian Immunological Society on Immunotherapy and Advances in Immunology; Faridabad, India 01-03 November 2018
- Gupta, Y., Singh, A., Sharma, M. and Sharma, S. 2019. Assessment of Immunogenicity of Rv 2389c Mtb gene product by *in silico* analysis. DST Science Conclave at Miranda House, University of Delhi, Delhi, 16-18 January 2019
- Yadav, Y. 2019. Histopathological changes in *Eisenia fetida* induced by sublethal toxic levels of dichlorvos. International Seminar on Sustainable Environment and Agriculture under Global Climate Change, MDU, Rohtak, 21 February 2019
- Arora, J., Jit, S., Anubhuti, Vartika, Rama, Vibhuti and Chandrika. 2018. Antimicrobial finishing of textiles with rind of pomegranate, *Punicagranatum*: applications in the health care sector. National Conference on Innovations In

Sciences and Emerging Challenges in Health and Environment (NSHE-2018), Daulat Ram College, University of Delhi, 20 March, 2018.

### **Publications in Seminars/Conferences/Workshops Proceedings (2017-18)**

#### **International**

- Pathak, M., Sharma, M. and Kumari, R. 2017. Design of affordable water purification devices using green and ecofriendly silver nanoparticles. International Conference on Global Trends in Pure and Applied Chemical Sciences, SRM University, Delhi NCR Campus, Ghaziabad, 08-09 December 2017
- Sharma, M., Pathak, M. and Kapoor, P. N. 2017. The Sol-Gel Method- Pathway to ultrapure and homogeneous MMO (mixed metal oxide) Nanoparticles. International Conference on Global Trends in Pure and Applied Chemical Sciences, SRM University, Delhi NCR Campus, Ghaziabad, 08-09 December 2017
- Sonkar, S. M. and Mohabey, H. 2017. Thermal studies and kinetic parameters of copper (II) complexes of some novel N-Hydroxyamidines. International Conference on Global Trends in Pure and Applied Chemical Sciences, SRM University, Delhi NCR Campus, Ghaziabad, 08-09 December 2017
- Pathak, M., Sharma, D., Ojha, H. and Kakkar, R. Binding mechanism of the antidiabetic drug, metformin with the digestive enzyme, pepsin: an experimental and theoretical study. International Conference on Molecular Spectroscopy, from Molecules to Functional Materials, Kraków-Białka Tatrzańska, Poland, 03-07 September. 2017.
- Saini, K. Green synthesis of ZnO nanoparticles by using *Syzygiumcumini* and their photocatalytic, antibacterial and antidiabetic activity. International Conference on Nanomaterials and Nanotechnology (ICNANO-2017) organized by International Association of Advanced Materials (IAAM) in collaboration with VBRI Press AB, Sweden at Vinoba Bhave Research Institute, Allahabad, India, 01- 03 March 2017.
- Saini, K. Green synthesis of ZnO nanoparticles by using *Jasminum* and *Allium cepa* and their photocatalytic and anti-bacterial activity International Conference on Nanotechnology, IIT, Roorkee, 06-08 December 2017.
- Saini, K. Green synthesis of ZnO nanoparticles by using *Azadirachtaindica* and their photocatalytic, anti-bacterial, anti-fungal and anti-diabetic activity. European Advanced Materials Congress-2017, Stockholm, Sweden, 22-24 August 2017.
- Poonam. Design and synthesis of functionalized organic-inorganic hybrid nanomaterials and its application in biomass conversion process. Material Research Society in 2017 MRS Spring Meeting, Phoenix Convention Center and Sheraton Grand Phoenix Hotel in Phoenix, Arizona. USA, 17-21 April 2017
- Poonam. New plasmeps in inhibitors targeting multiple life stages of the malaria parasite. International Conference on Emerging Trends in Drugs Development and Natural Products, Department of Chemistry, University of Delhi, Delhi, 12-14 January 2018
- Arora, J., Gupta, A., Bhatt, A., Sirohi, B., Pathak, M., Roy, B., Sheikh, A.T. and Jolly, P. Generation of acid free, chlorine free and azo free hand-made paper by implementing 4r's of paper making reduce, reuse, recycle and recreate. International Conference Role of Microbe- Plant-Animal Interactions in Human Health, University of Delhi, Delhi, 26-28 September 2017
- Kumari, R. Reporter gene technology and biosensing: a boon in environmental pollution management. In: INSCR International Conference Role of Microbe- Plant-

Animal Interactions in Human Health, University of Delhi, Delhi, 26-28 September 2017

- Jain, R. and Kumari, R. 2017. Study of differentially-expressed genes (DEGs) in Argyrin A, an anti-proliferative drug treated samples of intestinal adenomatous polyps using an integrated bioinformatics analysis. In: INSCR International Conference Role of Microbe- Plant-Animal Interactions in Human Health, University of Delhi, Delhi 26-28 September 2017
- Rawat, C.D. and Sharma, S. 2017. Research based pedagogical tool: redesigning pedagogy. International Conference: Aligning Education Systems to the Challenges of the Future, organized by Department of Education, SPM College, University of Delhi, November 8-10, 2017
- S. Sharma, B. Sharma, R. Kaur, Vinay Gupta, Monika Tomar and A. Kapoor, Growth of ternary  $Cd_xZn_{1-x}O$  thin films in oxygen ambient using pulsed laser deposition AIP Conference Proceedings, 1953 (2018) 100059.
- Shaan Ameer, Kajal Jindal, Monika Tomar, P.K. Jha and Vinay Gupta. Study of half-metallicity in  $BiMn_xFe_{1-x}O_3$ . AIP Conference Proceedings, 1953 (2018) 110018.
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- Narender Budhiraja, Sapna, Monika Tomar, Vinay Gupta and S.K. Singh. Structural and dielectric properties of  $Cu_{2-x}Nd_xO$  nanostructures.. AIP Conference Proceedings, 1942 (2018) 120022. Doi: 10.1063/1.5029062
- Sheetal Dewan, Monika Tomar, A.K. Kapoor, R.P. Tandon, and Vinay Gupta. Luminescence studies of laser MBE grown GaN on ZnO nanostructures. Proceedings of SPIE- The international society for Optical Engineering, 10354 (2017) 103540V.
- Surbhi Gupta, Ayushi Paliwal, Vinay Gupta and Monika Tomar. Surface plasmon resonance based electro-optic measurement of SBN thin films Proceedings of SPIE- The international society for Optical Engineering, 10354 (2017) 103540S.

### National

- Pathak, M. Effect of hazardous chemicals: security perspectives. Special Training Course, CBRN Emergency Management for Parliamentary Security Services, Institute of Nuclear Medicine and Allied Sciences, DRDO, 09 January 2018.
- Rani, N. and Saini, K. Electrochemical synthesis of Copper nanoparticles/Zinc oxides composite modified electrode for electrocatalytic/plasmonic sensing of glucose. National Workshop on Instrumentation Techniques for Research in Chemical Sciences (WITRCS-2017), Department of Chemistry, Kanoria PG Mahila Mahavidyalaya, Jaipur, 22-23 December 2017
- Poonam. Importance of catalyst in environmental safety. Frontiers of Research, VigZest 2017, Miranda House, University of Delhi, Delhi.
- Rawat, D. Exploring antibacterial activity and green synthesis of metal nanoparticles. Frontiers of Research, VigZest 2017, Miranda House, University of Delhi, Delhi.
- Bhatt, A., Gupta, A., Sirohi, B., Mishra, S., Beria, V., Rimjhim, Verma, O., Nishtha, Rani, J., Gupta, A., Arora, J., Pathak, M., Roy, B., Sheikh, A.T. and Jolly, P. 2017. Solid waste management at Miranda House: A zero solid waste zone. Third National

Symposium on Environment: Challenges Generation Next, Deshbandhu College, University of Delhi, Delhi, 31 March 2017

- Arora, J., Jit, S., Srivastava, V., Devi, M. P., Yadav, A., Rajpoot, R. and Bhat, V. 2017. Application of natural dyes on textiles: colours of nature. Undergraduate Research Conference, O. P. Jindal School of Liberal Arts and Humanities, 07-08 April 2017
- Sharma, S. and Sharma, M. Immunoinformatics for rational vaccine design. Workshop under the aegis of DBT Star College Scheme, Department of Zoology, Miranda House, University of Delhi, Delhi, 18-22 September 2017
- Sharma, S. Immuno-informatics: A new economical approach to rational vaccine design. National Workshop Advancement in Immunology, VP Chest Institute, University of Delhi and Indian Immunology Society, 12-13 October 2017.
- Sheetal Dewan, Monika Tomar, R.P. Tandon and Vinay Gupta, Laser Molecular Beam Epitaxy (LMBE) Technique grown GaN p-n junction. Proceedings Materials Today, 5 (7) (2018) 15361-65. Proceedings of the 10th National Conference on Solid State Chemistry and Allied Areas, 1-3 July, 2017, DTU, Delhi.
- Reema Gupta, Lokesh Rana, Anjali Sharma, A.P. Freundorfer, Michael Sayer, Monika Tomar, and Vinay Gupta. High frequency Coplanar Microwave Resonator using ferroelectric thin film for Wireless Communication Applications. Proceedings Materials Today, 5 (7) (2018) 15395-98. Proceedings of the 10<sup>th</sup> National Conference on Solid State Chemistry and Allied Areas (ISCAS-2017), 1-3 July, 2017, DTU, Delhi
- Lokesh Rana, Reema Gupta, Anjali Sharma, Vinay Gupta and Monika Tomar, Novel designs of SAW devices for highly sensitive chemical sensors. Proceedings Materials Today, 5 (7) (2018) 15371-75. Proceedings of the 10th National Conference on Solid State Chemistry and Allied Areas, 1-3 July, 2017, DTU, Delhi.
- Krishna Kamal Halder, Monika Tomar, V.K.Sachdev and Vinay Gupta. To study the effect of MWCNT incorporated into PVDF-Graphite composites for EMI shielding applications Proceedings Materials Today, 5 (7) (2018) 15348-53. Proceedings of the 10th National Conference on Solid State Chemistry and Allied Areas, 1-3 July, 2017, DTU, Delhi.