Centre/School/Special Centre: School of Physical Science

Department: Department of Chemistry

Phone: 7587448805

Email: artifeb29@gmail.com

Personal Webpage Link: No

Qualifications

- D. Phil in Polymer Chemistry under Guidance of Prof Kunj Behari from University of Allahabad, Allahabad in 2006
- M Sc with First Division scoring 72.3 % from University of Allahabad, Allahabad in 2000. (Topped in Physical Chemistry Specialization with 78 % in Final Year)
- B. Sc. with First Division scoring 70 % from University of Allahabad, Allahabad in 2000
- High School and Intermediate with First division From U P Board, Allahabad
- Two Year Diploma in German language from University of Allahabad, Allahabad in 2006.

Area of Interest/Specialization

- Specialization in Physical Chemistry
- Polymer Synthesis by Free Radical polymerization (FRP) and controlled Radical polymerization (CRP) methodology
- Graft and Copolymers Synthesis
- Superabsorbent hydrogel Synthesis
- Polymeric composite Synthesis
- Drug delivery kinetics study
- Versatile applications studies of different polymers

Experience

Teaching Experience

Present Employment: **Assistant Professor, Department of Chemistry, Guru Ghasidas Vishwavidyalaya, Bilaspur, CG July, 2011 to till now**

Past Employment: **Lecturer, Banasthali Vidyapith, Jaipur from 2008 to 2009.**

Examiner of Patents and Design, Chemical Science, Patent Office, New Delhi from 2009 to 2011

Post-Doctoral Experience

DST Fast Track Young Scientist, Banaras Hindu University, Varanasi, India from 2007 to 2008

CSIR, Research Associateship, University of Allahabad, Allahabad in 2007.

Awards and Honors

- Recipient of **Project Fellowship** from University Grants Commissions, New Delhi in the Year 2003-2006. **Project Title:** "Polymerization of commercially useful vinyl monomers like acrylic acid, methacrylic acid, N,N' dimethyl acrylamide, N-Methyl acrylamide etc. and to synthesize & characterize the graft copolymers of these monomers with xanthan gum, chitosan, dextran etc. resulting in ion exchangers, super-absorbents, smart gels etc.'' **Preceptor:** Prof. Kunj Behari, Ex–Head, UGC Emeritus Fellow Department of Chemistry, University of Allahabad, Allahabad 211002, India.
- Recipient of **Research Associateship** (1 April 2007 to 18 September 2007) from Council of Scientific & Industrial Research, New Delhi in the Year 2007 **Project Title:** "Preparation of hydogels, antimicrobial agents and flocculants by grafting vinyl monomers onto natural polymers''. **Preceptor:** Prof. Kunj Behari, Ex–Head, UGC Emeritus Fellow Department of Chemistry, University of Allahabad, Allahabad-211002, India.
- Award of **Young Scientist Scheme** DST New Delhi under SERC Fast Track Proposal (20th Sep. 2007-30th June 2009) **Project Title:** "Synthesis and study of an amino acid based vinyl monomers and polymers in aqueous media" **Total project Cost:** Rs.19, 92,000.00. **Working Place**: Department of Chemistry**, Banaras Hindu University, U.P. India.**

Awards

- **Received Best oral presentation award: (**entitled "Waste water treatment: Scope of natural polymer in environment protection") in national symposium on nutritional security, environmental protection: present scenario and future prospects organized by society of biological science and rural development, Allahabad during 10-11 Nov. 2017.
- **Received Best oral presentation award** (entitled "Chemically Modified crosslinked xanthan gum and its versatile application") in International conference Techno –A- tech 2018 on engineering, Science and technology, idea, Innovation and initiatives organized by Chouksey engineering Collage, Bilaspur held on 26-27th October 2018.

Research Projects completed

- **Synthesis and study of an amino acid based vinyl monomers and polymers in aqueous media" (SR/FTP/CS-109/2006 dated 13.03.2007) DST, New Delhi**
  Project Amount – Rs 19, 92,000/-
- **Synthesis and Characterization of smart polymeric hydrogel by free radical polymerization process" (F. No. 42-387/2013 (SR) UGC, New Delhi**
  Project Amount – Rs 9, 86,800/-

International Collaboration/Consultancy: NIL

Best Peer Reviewed Publication (up-to 10)

1. Koushik Nandy, **Arti Srivastava**, Shere Afgan, Rajesh Kumar, Dharmendra Kumar Yadav, Vellaichamy Ganesan "Trithiocarbonate-mediated RAFT synthesis of a block copolymer: Silver nanoparticles integration and sensitive recognition of Hg^{2+} " *Polymer Bulletin* , 2022. **Impact factor 2.87**

2. Ambika Srivastava, Shere Afgan · Paramjeet Yadav · Rajesh Kumar, **Arti Srivastava** and ·Ravindra Nath Kharwar, Synthesis & characterization of tri arm Indole based ATRP Polymer and antibacterial study with its silver nanocomposite, **Journal of Polymer Research** (2022) 29:150.

   Impact factor 3.08

3. Koushik Nandy, **Arti Srivastava,** Shere Afgan, Deepak, Rajesh Kumar, , Arun Kumar Rawat, Rajan Singh, Rakesh K. Singh "The benzyl ethyl trithiocarbonate mediated control synthesis of a block copolymer containing N-vinyl Pyrrolidone by RAFT methodology: Influence of polymer composition on cell cytotoxicity and cell viability, **European Polymer Journal**, 122 (2020) 109387.

   Impact factor 4.59

4. Deepak, Swati Sharma, Ashok Kumar, Rajesh Kumar, Koushik Nandy, **Arti Srivastava**, Munendra Singh Tomar, Arbind Acharya, *Developing a nontoxic and biocompatible polymeric self-assembly by using RAFT methodology for biomedical application*, **Material Today communications**, 18 (2019) 14-24.

   Impact factor 3.383

5. Priyanka Chawla, Arti **Srivastava**, and Mridula Tripathi "*Performance of Chitosan Based Polymer Electrolytefor Natural Dye Sensitized Solar Cell"* in Environmental **Progress & Sustainable Energy**, 2018.

   Impact factor 2.431

6. Sriwas, Kamlesh: Ghosale, Archana: Nirmalkar,Nidi: **Srivastava, Arti:** Singh, Kumar, Sunil: Sinde, S. Sandip, Removal of endrin and dieldrin isomeric pesticides through stereoselective adsorption behavior on the grapheme oxide-magnetic nanoparticles, **Environmental Science pollutants research**, 24(32) 24980-24988, 2017.

   Impact factor 4.223

7. Kumar, Ashok: Deepak: Sharma, Swati: **Srivastava, Arti;** Kumar, Rajesh. Synthesis of xanthane gum graft copolymer and its application for controlled release of highly water solublele cofloxacin drug in aqueous medium, **Cardohydrate polymers**, 171, 211-219, 2017.

   Impact factor 9.3

8. **Arti Srivastava**, Rajesh Kumar and Pratibha Mandal: Solid State Thermal Degradation Behaviour of Graft Copolymers of Carboxymethylcellulose with Vinyl Monomers, **Journal of Biological Macromolecule**, vol. 87, 357–365, 2016.

   Impact factor 6.95

9. **Srivastava, Arti;** Kumar, R.; Srivastava, Ambika; Singh, P. and Mishra, V.: *Comparative study of thermal degradation behaviour of graft copolymers of polysaccharides and vinyl monomers*, **Journal of Thermal Analysis and Calorimetry**: 107(1), 211-223(2012). DOI 10.1007/s.10973-011-1921-y, Published by Springer.

   Impact factor 4.62

10. Panday P. K. **Srivastava A.** Tripathi J. Behari K.: Graft Copolymerization of Acrylic Acid on to Guar Gum initiated by Vanadium (V) – Mercaptosuccinic Acid Redox Pair, **Carbohydrate Polymers,** 65(4), 414 - 420 (2006), Published by Elsevier. Impact factor

    Impact factor 9.3

Patent: (01)

A process for preparing graft copolymer used for absorbing heavy metal by Arti Srivastava, Rajesh Kumar, Kunj Behari : Patent Application No.: 1309/DEL/2003. Granted on 2011, Patent no. : 247798

Recent Books/Book Chapters/Monographs etc.

Book Chapters and Edited Book

- **Chapter 1**

Importance of polysaccharides as antioxidant, Arti Srivastava, Rajesh Kumar and Mridula Tripathi, published by Anubhav publishing house, Allahabad, India and edited by Archana Pandey and Babita Agrawal, 2016, ISBN 978-93-80134-75-8.

- **Chapter 2**

Synergistic antioxidant activity of essential oils of Zingiber officinale and Curcuma longa, Mridula Tripathi, Mamta Tripathi, Arti Srivastava and Priynaka Chawla, published by Anubhav publishing house, Allahabad, India and edited by Archana Pandey and Babita Agrawal, 2016, ISBN 978-93-80134-75-8

- **Chapter 3**

Innovation in agriculture via polymeric hydrogel, Arti Srivastava, Rajesh Kumar and Mridula Tripathi,2016,published by society of rural development and biological sciences, Allahabad, INDIA, 2016, ISBN 978-81-923494-6-6

- **Chapter 4**

Antioxidant activity of methanolic and aqueous extract of beta vulgaris roots published by society of rural development and biological sciences, Priynaka Chawla, Mridula Tripathi and Arti Srivastava, 2016,Allahabad, INDIA, 2016, ISBN 978-81-923494-6-6

- **Chapter 5**

Properties and Biomedical Applications of different copolymeric micelles, Arti Srivastava, Rajesh Kumar, Mridula tripathi and Pratibha Mandal , In book: Advances in chemical and applied sciences, Vol 1,2018,pp.38, publisher CMP Chemical Society, ISBN 978-81-9350520-5

- **Chapter 6**

Review on Amphiphilic copolymer, Arti Srivastava, Rajesh Kumar, Pratibha Mandal and Mridula Tripathi,In book: Advances in chemical and applied sciences, Vol 1, 2018 ,pp. 189, publisher CMP Chemical Society, ISBN 978-81-9350520-5

- **Chapter 7 (BOOK Proceeding)**

Environmental friendly low cost adsordents for the removal of organic pollutants, Arti Srivastava, Pratibha Mandal, Mridula Tripathi and Rajesh Kumar, In book: Innovation in agriculture, environment and health research for ecological restoration, 2019, pp.291-298, Page 7 of 12 published by society of rural development and biological sciences, Allahabad, INDIA, ISBN: 978-81923535-5-5.

- **Chapter 8 (Book Proceedings)**

Smog: A hazardous Air pollutant, Abha Tripathi, Arti Srivastava and Mridula Tripathi, In book: Innovation in agriculture, environment and health research for ecological restoration, 2019.pp.340, published by society of rural development and biological sciences, Allahabad, INDIA, ISBN: 978-81923535-5-5.

- **Chapter 9**

Chemical Toxicology and its Influence on Environment Arti Srivastava, Pratibha mandal, Mridula Tripathi and Rajesh Kumar, In book:: Environmental Challenges and issues in present scenario, 2019, published by CMP Chemical Society, Allahabad, ISBN 978-93-88018-18-0.

- **Chapter 10**

Natural polysaccharide Carrageenan: Physical and Chemical properties with its application, Arti Srivastava, and Pooja Kumari, In book: Advances in chemical and applied sciences, Vol 2, 2019,pp. 322, published by CMP Chemical Society, Allahabad, ISBN 978-93-88018-17-3

- **Chapter 11**

Expansion of Agricultural field using biodegradable polymers, Arti Srivastava, Mridula Tripathi and Rajesh Kumar, Book title: Earth –I (Environmental Challenges and issues in present scenario),2019, pp. 106, Published by Krishna Computer Sansthan, Allahabad, ISBN 978-81-942034-4-5.

2020

- **Chapter 12**

Dye sensitized Solar Cell: Approach to clean energy, Mridula Tripathi, Arti Srivastava, Priyanka Chawla and Abha Tripathi , In book: Advances in chemical and applied sciences, Vol 3, 2020, published by CMP Chemical Society, Allahabad, ISBN 978-93-88018-19-7.

- **Chapter 13**

A Green and Sustainable Biocatalytic Routes to Prepare Biobased Polyols as a Precursor For Polyurethanes as Compared to Existing Biobased Polyol Technology, Bhaskar Sharma,, Hema Tandon, Pathik Maji and Arti Shrivastava. In book: Catalysis: Current and Future Developments Vol. 1 , 2020, pp. 1-20, Chapter 7 ,published by Bentham Science Publisher, eISBN 9789811458514.

- **Chapter 14**

Polymers used as catalyst; Arti Shrivastava, Pratibha Mandal and Bhaskar Sharma, In book: Catalysis: Current and Future Developments Vol. 1, 2020, pp. 1-20, published by Bentham Science Publisher, eISBN 9789811458514.

- **Chapter 15**

Determination of Antioxidant activity of flowers of cassia Glauca; Mridula Tripathi, Arti Srivastava, Abha Tripathi, and Priyanka Chawla, In book: Three major Dimensions of life: Page 8 of 12 .Environment, Agriculture and health, 2020.pp.71, published by society of rural development and biological sciences, Allahabad, INDIA, ISBN: 978-81923535-7-9.

- **Chapter 16**

Synthesis and Characterization of crosslinked graftcopolymer based on carrageenan and acrylamide using Redox System; Arti Srivastava, Rajesh Kumar, Mridula Tripathi and Savitri Dewangan, In book: Three major Dimensions of life: Environment, Agriculture and health, 2020.pp.193, published by society of rural development and biological sciences, Allahabad, INDIA, ISBN: 978-81923535-7-9.

Edited Book Published

- **Edited Book 1**

  Edited Book entitled "*Versatile Solicitations of Material Science in Diverse Science fields*" published by Nova science publisher, USA , ISBN: 978-1-53619-763-1, July 2021 and Edited by Dr Mridula Tripathi, Dr Arti Srivastava and Dr Kalpana Awasthi

- **Edited Book 2: In Publication Process from Nova Science Publisher, USA**
- **Edited Book 3: Under Review from Bentham Science Publisher**
- **Edited Book 4: In Publication Process from Krishna Publisher. India**
- **Adaptor: Review table of Content of the popular Text Book of Polymer Science, 3rd Ed by F W Bilmeyer published by Wiley Interscience, USA**

Invited Talk

- **Talk delivered on the topic "Synthesis and Characterization of Carrageenan coated Magnetic NPs using acrylamide and carrageen based polymeric material" in the XX-National Seminar on Ferroelectrics & Dielectrics (NSFD-2018) organized by Department of Pure & Applied Physics, Guru Ghasidas Vishwavidyalaya, Bilaspur, C.G. India during December 14-16, 2018.**

- **Delivered an invited lecture on " Safety and Precaution in Polymer Synthesis" in Skill development training on ' Basic Laboratory skill and safety management in physical sciences' organised by school of physical sciences and skill development cell during march 12-13,2019**

- **Delivered lecture in national seminar" Present Scenario of environmental challenges and issued on 16 December 2018 organized by CMP Degree Collage, University of Allahabad, Allahabad.**

- **Delivered lecture on "Studies on versatility of Microwave-Induced Graft copolymerization of acrylic acid onto amylopectin via FRP" in National seminar on "Innovative Frontiers in Applied Sciences" during 26th-28th September, 2019 organized by CMP Degree Collage, University of Allahabad, Allahabad.**

- **Paper Presented in different International/National Conferences/ Symposiums : more than 25**

Research Supervision

- **Ph. D Awarded**
  1. **Pratibha Mandal in 2019**
  2. **Koushik Nandy in 2022**
- **Ph D Pursuing**
  3. **Mrs Neeru Sharma**
  4. **Ms Ashlesha Kawale**
- **M Sc. Dissertation Awarded : 41**
- **M Sc. Dissertation Pursuing : 04**

Administrative Responsibilities

Present Administrative Responsibilities

- Cultural Coordinator: School of Physical Science, GGV from 2019
- DSW Scheme Scrutiny member, GGV 2022
- NAAC Coordinator, Criteria 2, Department of Chemistry, GGV: 2018
- Time Table Coordinator, Department of Chemistry, GGV from 2018
- Alumni Coordinator, Department of Chemistry, GGV from 2018
- DRC Member, Department of Chemistry, GGV from 20
- PPC member, Department of Chemistry, GGV from 2018
- Cultural Coordinator, Department of Chemistry, GGV from 2013
- Admission Committee, Department of Chemistry, GGV

Past Administrative Responsibilities

- Wardenship, Girls Hostel , Guru Ghasidas Vishwavidyalaya from 2012-2017
- Convocation committee member from 2012 to 2022
- Coordinator, library, Department of Chemistry, GGV from 2018
- Academic coordinator of Department of Chemistry, GGV
- Discipline committee, Department of Chemistry, GGV
- Cultural Coordinator
- Admission committee
- Assistant center Superintendent

Additional Information

Life member of following Academic bodies

- Life member of Indian Science Congress Association, India (Membership No: L12049)
- Life member of Indian Council of Chemist, India (Membership No.: LM 1242)
- Life member of IANCAS, BARC Trombay.
- Life member of Society of Rural Development and Biological sciences, Allahabad

Member of Editorial Board:

- Research Journal –Advanced Scientific Research, Allahabad

Reviewer of the Following Peer Reviewed journals

- Indian Journal of Traditional Knowledge, CSIR, India
- International journal of material research, De Gruyter

Member of Board of Studies, Durg Science Collage, Durg