



School: School of Physical Sciences

Department: Chemistry

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Personal Webpage Link

Qualifications:

Ph.D. in Organic/Polymer Chemistry (June 2000-March 2004): Department of Textile and Macromolecular Chemistry, RWTH, Aachen, Germany

Mater of Science in Chemistry (July 1996-June 1998): St. John's College, Agra, India (Dr. B. R. A. University, Agra)

Area of Interest/Specialization

Organic-polymer synthesis, Enzymatic and chemo-enzymatic assisted reactions, Polymers derived from biorenewables resources, Silicone-containing polymers, Polymers for drug delivery, Controlled radical polymerization, Non-isocyanate routes to polyurethanes.

Experience

07/2011-Present: Assistant Professor in Chemistry, Guru Ghasidas Vishwavidyalaya (A Central University), Bilaspur-495009 (C. G).

07/2010-06/2011: Assistant Professor (Ad-hoc) in Chemistry, Guru Ghasidas Vishwavidyalaya (A Central University), Bilaspur-495009 (C. G).

09/2005-01/2010: Postdoctoral Researcher at Polytechnic institute of NYU. I worked on various NSF funded Industrial funded projects involving the studies of enzyme catalysis for the preparation of polymeric materials.

12/2004-08/2005: Postdoctoral Research Fellow at the Department of Organic Chemistry, Polymer Chemistry Research Group, Krijgslaan, Ghent, Belgium, and worked on “Synthesis and Characterization of Novel and Complex Polymeric architectures, interesting for lithographic applications.

06/2000-03/2004: Ph.D Student in the working group of Prof. Dr. H. Höcker/Dr. H. Keul at the Department of Textile and Macromolecular Chemistry, RWTH, Aachen, Germany. The research topic of the Ph.D work is “Synthesis and Characterization of Alternating Poly(amide urethane)s”. The prepared polymeric material was interest of powder coatings.

Awards and Honors

Postdoctoral fellowship from University of Ghent Belgium

Research Projects

UGC-BSR Research Start-Up-Grant was sanctioned on the project as entitled “Green enzymatic routes to liquid polyols as precursor for polyurethane manufacturing: Towards a sustainable development”, from UGC, New Delhi.

International Collaboration/Consultancy

Best Peer Reviewed Publication (up-to 10)

1. Enzymatic synthesis and solid-state properties of aliphatic polyesteramides with polydimethylsiloxane blocks. **Bhaskar Sharma**, Abul Azim, Himanshu Azim, Richard A. Gross, Elisa Zini, Maria Letizia Focarete and Mariastella Scandola, *Macromolecules* **2007**, 40, 7919.
2. Enzymatic synthesis and microstructure analysis of Silicone Polyesteramides. **Bhaskar Sharma**, Abul Azim, Himanshu Azim, Richard A. Gross, Elisa Zini, Maria Letizia Focarete and Mariastella Scandola (Division of Polymer Chemistry for the 234 ACS National Meeting, in Boston, (August 19-23 2007), POLY 310, Polymer Preprint **2007** 48, 981-982.

3. Lipase-catalyzed routes to polyol-polyesters, Richard A. Gross, **Bhaskar Sharma**, 238 ACS National Meeting, in Washington DC (August 16-20, 2009), POLY 468, *Polymer Preprints* **2009**, 50(2),48.
4. Synthesis and Characterization of Alternating Poly(amide urethane)s using e-Caprolactone, Diamines, and Diphenyl Carbonate, **B. Sharma**, H. Keul, H. Höcker, T. Loontjens, R. van Benthem, *Polymer* **2005**, 46, 1775.
5. Microstructure and Properties of Poly(mide urethane)s Derived from e-Caprolactam, Amino alcohols, and Diphenyl carbonate or Ethylene carbonate: Comparison of the Reactivity of α -Hydroxy- ω -O-phenyl urethanes and α -Hydroxy- ω -O-hydroxyethyl urethanes, **B. Sharma**, L. Ubaghs, H. Keul, H. Höcker, T. Loontjens, R. van Benthem, *Macromol. Chem. Phys.* **2004**, 205, 1536.
6. Synthesis and Characterization of Alternating Poly(amide urethane)s from e-Caprolactam, Amino alcohols, and Diphenyl carbonate, **B. Sharma**, L. Ubaghs, H. Keul, H. Höcker, T. Loontjens, R. van Benthem, *Polymer* **2004**, 45, 5427.
7. Synthesis and Characterization of Alternating Poly(amide urea)s and Poly(amide urethane urethane)s from e-Caprolactam, Diamines, and Diphenyl carbonate or Ethylene carbonate, L. Ubaghs, **B. Sharma**, H. Keul, H. Höcker, T. Loontjens, R. van Benthem, *e-Polymers* **2003**, no. 068. Page no. 01
8. Seasonal Variation of Ambient Air Quality at Selected Sites in Agra City, R. Mudgal, **B. Sharma**, R. Upadhyay, A. Taneja, *Indian Journal of Radio and Space Physics* **June 2000**, 29, 127
9. First iodine/IL-catalyzed carbohydrate activation as aldehyde equivalent for [C+2C+N] construction of β -lactam ring. Vijai K. Rai, Bhaskar Sharma, Vidya R. Sharoff, Ankita Rai, *Tetrahedron Letters* 57 (**2016**) 3260–3263.
10. Synthesis, crystal structure, and theoretical studies of a macrocyclic silver(I) complex of imino-pyridyl Schiff base ligand. Jahangir Mondal, Meman Sahu, Bhaskar Sharma, Rakesh Ganguly, Shubhamoy Chowdhury and Goutam Kumar Patra, *Eur. J. Chem.* **2021**, 12(3), 248-255

Recent Books/Book Chapters/Monographs etc.

Book Edited

1. Book edited by Bhaskar Sharma ‘**B. Sc. Chemistry –Second Year-Organic Chemistry (2018)**’, Pt. Sunderlal Sharma Opening University, Bilaspur , CG, Publisher: Pragya Publications Pvt. Ltd. Mathura (UP)

Book Chapters:

1. A Green and Sustainable Biocatalytic Routes to Prepare Biobased Polyols as a Precursor For Polyurethanes as Compared to Existing Biobased Polyol Technology, Catalysis: Current and Future Developments, Bhaskar Sharma, Hema Tandon, Pathik Maji and Arti Shrivastava, *Bentham Science Publishers 2020*, Vol. 1. 148-168 (ISSN: 2737-4416)
2. Polymers Used as Catalyst, Catalysis: Current and Future Developments, Arti Srivastava, Bhaskar Sharma and Pratibha Mandal, *Bentham Science Publishers 2020*, Vol. 1. 169-193 (ISSN: 2737-4416)

Research Supervision:

Ph.D research work guidance as supervisor

1. Hema R. Tandon (Ph.D ongoing)
2. Kunti Rani Bhagat (Course work)

M.Sc Project work guidance as supervisor

26 M.Sc students have completed the M.Sc Project work

Administrative Responsibilities

Member of Board of School of School of Physical Sciences, GGV, Bilaspur

Worked as acting HoD in the Department

Mentor of B. Sc. 6th sem. Chemistry students

Polling officer in Student Union Election, GGV, Bilaspur

Assistant Center Superintend in End Semester Examination

Departmental coordinator of Training and Placement Cell, GGV, Bilaspur

Member of various Departmental committee such as Physical Verification Committee, Purchasing Committee, Write-off committee, Anti-ragging and Discipline committee, Building Committee, Time-Table in charge etc .

Member of scrutiny committee for the selection of Assistant Professor and Associate Professor in the University

Member of various conferences/seminars/workshops, organized by Department and university level.

Additional Information

04 invited talk delivered, and 22 scientific papers posters presented, at national and international conferences.

Participated in 02 short term courses, 03 Refresher course, and 01 orientation program.

Attended 08 National and international webinar, 05 workshops, 02 online faculty development program

Life Membership:

1. Indian Association of Nuclear Chemists and Allied Scientists (IANCAS)
2. Indian Science Congress
3. Council of Indian Chemists