



**Centre/School/Special Centre:** Physical Science

Department: Chemistry

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[santosh.chirality@gmail.com](mailto:santosh.chirality@gmail.com)

**Personal Webpage Link:**

<https://ggu.ac.in/Admin/Files/Resume/SST%20CV.pdf>

### Qualifications:

- ✚ Ph. D. (Physical-Organic Chemistry)- April 1998, School of Studies in Chemistry, Pt. Ravishankar Shukla University, Raipur (C.G.), India Guide: *Prof. Kallol K. Ghosh*
- ✚ M. Sc. (Specialization Inorganic Chemistry)- 1994, Govt. Nagarjuna Post Graduate College of Science, Raipur, Pt. Ravishankar Shukla University, Raipur (C.G.), India (67.4%)
- ✚ B. Sc. 1992- Govt. Nagarjuna Post Graduate College of Science, Raipur, Pt. Ravishankar Shukla University, Raipur (C.G.), India (64.2%)

### Area of Interest/Specialization:

Organometallic Chemistry, Asymmetric Catalysis, Chirality, Biomimetic Oxidations, Microwave assisted Chiral Synthesis, Vibrational Circular Dichroism, and Computational Density Functional Theory, Mesoporous Materials, Acidic and Alkaline Hydrolysis etc.

### Experience:

#### ✚ Teaching

- July 2011-Continuing: *Assistant Professor*, Department of Chemistry, Guru Ghasidas Vishwavidyalaya (A Central University), Bilaspur CG
- 2008-2011: *Associate Prof. (Sen.)* Department of Applied Chemistry Shri Shankaracharya Engineering College Junwani, P.O. Nehru Nagar Bhilai 490020, (C.G.) India
- 1999-2001: *Lecturer*, Department of Applied Chemistry Shri Shankaracharya College of Engineering & Technology Junwani, P.O. Nehru Nagar Bhilai 490020 (C.G.) India

#### ✚ Postdoctoral Experience (Abroad)

- Jan. 2007- Dec. 2007 *Senior Postdoctoral Researcher*, Department of Chemistry, Institute of Basic Science and Sungkyunkwan Advanced Institute of Nanotechnology Sungkyunkwan University, Suwon, South Korea in the field of **Meso and Nanoporous Material**  
*Advisor Prof. Ji-Man Kim*

June 2006- Dec. 2006 *Senior Scientist*, Department of Chemistry, Department of Chemistry, Institute of Basic Science and Sungkyunkwan Advanced Institute of Nanotechnology Sungkyunkwan University, Suwon, South Korea in the field of the field of **Heterogeneous Asymmetric Catalysis**

*Advisor Prof. Choong-Eui Song*

July 2004-May 2006 *Postdoctoral Fellow*, Department of Chemical Engineering Inha University, Incheon, South Korea in the field of **“Asymmetric Catalytic Synthesis”** *Advisor: Prof. Geon-Joong Kim*

Sep. 2001-Aug.2002 *Postdoctoral Fellow*, Department of Chemistry, Inha University, Incheon, South Korea in Brain Korea -21 Programme in the field of

**“Biomimetic Oxidation Chemistry”** Sponsored by Ministry of

Education, Republic of Korea. *Advisor: Prof. Sung Soo Kim*

#### **Awards and Honors:**

- ✚ Most cited paper awards by Tetrahedron Letters, Elsevier Ltd. Oxford, UK
- ✚ Brain-Korea 21 Postdoctoral Award 2001, Ministry of Education, South Korea
- ✚ Korea Science and Engineering Foundation (KOSEF) fellowships, South Korea
- ✚ Teacher Summer Research Fellow at National Chemical Laboratory, Pune, India sponsored by Indian Academy of Sciences, Bangalore, India in the field of Zeolite (April, 2003- May 2003) *Advisor: Dr. S. Sivasanker*
- ✚ Senior Research Fellow awarded by Council of Scientific and Industrial Research, New Delhi, India (1997-1999) *Advisor: Prof. Kallol K. Ghosh*
- ✚ Project Fellow in the University Grants Commission, New Delhi, India (1994-1997) *Advisor: Prof. Kallol K. Ghosh*
- ✚ 2<sup>nd</sup> Position in Merit List in M. Sc.

#### **Research Projects:**

- ✚ Synthesis of Dinuclear Chiral (Salen)CoMX<sub>n</sub> Complex and Their Catalytic Application Towards Asymmetric Hydrolytic Kinetic Resolution of Terminal Epoxides [No.F.20-1/2012 (BSR)/20-1(3)-2012 (BSR)] ] Two Years 2012-2014 Sponsored by UGC New Delhi, India (*Completed*)
- ✚ Nanostructured organo-functionalized mesoporous silica materials: Synthesis and catalytic applications [No.2235 /CCOST/MRP/ dated 23-12-2015] Three years 2016-2019 Sponsored by Chhattisgarh Council of Science and Technology Raipur (*Completed*)

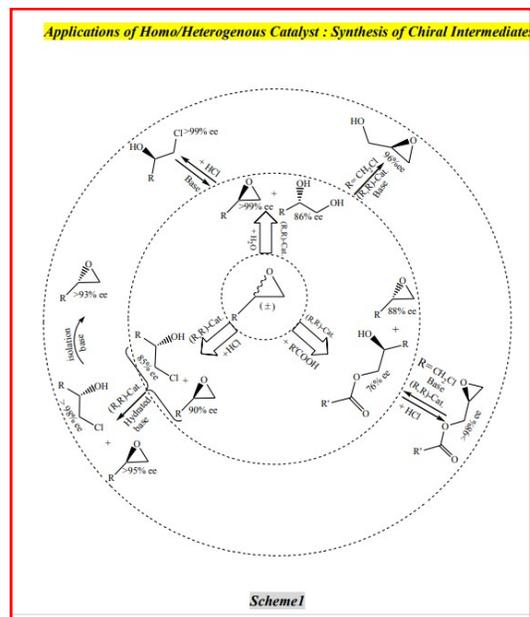
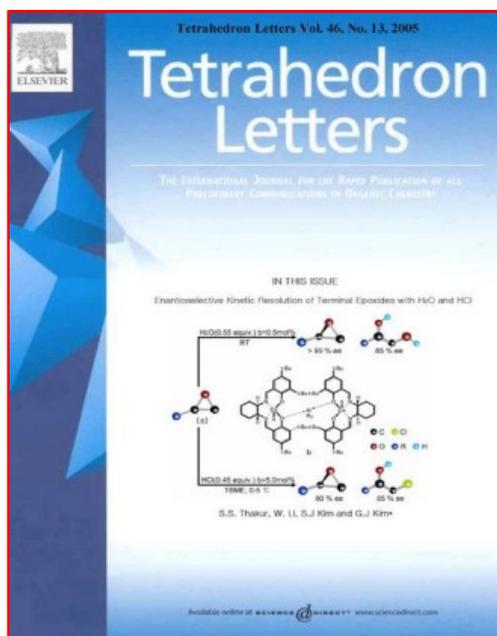
#### **International Collaboration/Consultancy- Nil**

#### **Best Peer Reviewed Publication (up-to 10)**

Total Paper published: 40 (35 International + 05 National)

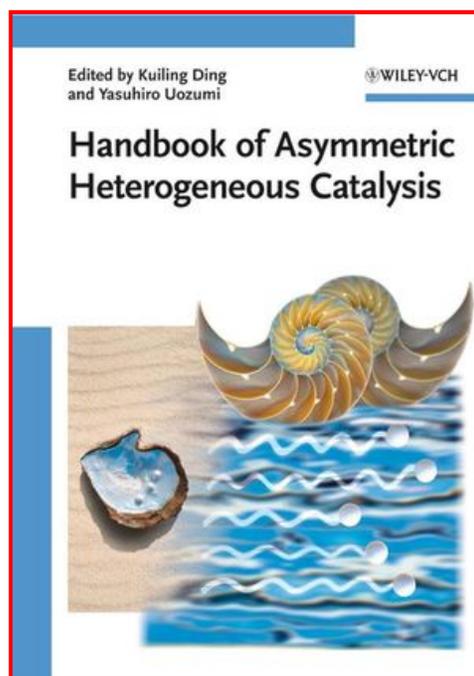
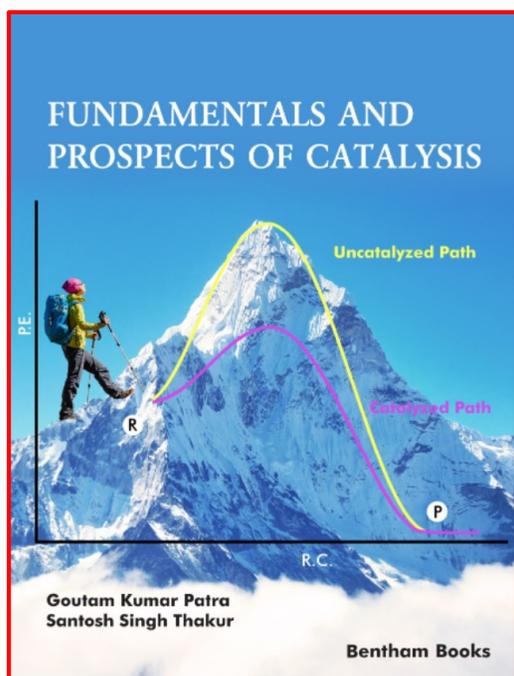
1. Patel, D.; Kurrey, G.R.; Shinde, S. S.; Kumar, P. Kurrey, G.R.; Kim G. J.; **Thakur, S. S.** *RSC Adv.* 2015, 5, 82699–82703 (Impact factor = 3.48 ; ISSN No. 2046-2069).
2. Patel, D.; **Thakur, S. S.** Shinde, S. S.; Kumar, P.; Catalytic and efficient synthesis of optically active terminal epoxides and 1,2-diols using a new lanthanum triflate assisted

- c1-symmetric bimetallic chiral salen cobalt complex *Letters in Organic Chemistry* 2018, 15, 960-966.
3. **Thakur SS**, Li W, Kim SJ, Kim GJ. Highly Reactive and Enantioselective Kinetic Resolution of Terminal Epoxides with H<sub>2</sub>O and HCl Catalyzed by New Chiral (salen) Co Complex Linked with Al *Tetrahedron Letters* 2005, 46, 2263-2266 (**Published with cover page**).
  4. **Thakur SS**, Li W, Shin CK, Kim GJ. Enantioselective Hydrolytic Kinetic Resolution of 1,2-Epoxy-3-phenoxy propane Derivatives by New Chiral (Salen) Cobalt Complexes *Catalysis Letters*, 2005, 104, 151-156. (**Impact factor = 2.291** ISSN No 1011-372X).
  5. **Thakur SS**, Chen SW, Li W, Shin CK, Koo YM, Kim GJ. A New Dinuclear Chiral Salen Complexes for Asymmetric Ring Opening and Closing Reactions: Synthesis of Valuable Chiral Intermediates *Journal of Organometallic Chemistry* 2006, 691, 1862-1872. (**Impact factor = 2.302** ISSN No 0022-328X).
  6. **Thakur SS**, Li W, Shin CK, Kim GJ. Asymmetric Ring Opening of Terminal Epoxides via Kinetic Resolution Catalyzed by New Bimetallic Chiral (Salen) Co Complex *Chirality* 2006, 18, 37-43. (**Impact factor = 1.724**; ISSN No. 1520-636X).
  7. Chen SW, **Thakur SS**, Li W, Shin CK, Koo YM, Kim GJ. Efficient Catalytic Synthesis of Optically Pure 1, 2- Azido Alcohols through Enantioselective Epoxide Ring opening with HN<sub>3</sub> *Journal of Molecular Catalysis A: Chemical* 2006, 259, 116–120. (**Impact factor = 3.679** ;ISSN No. 1381-1169).
  8. Kim SS , Lee HI , Shon JK , Hur JY, Kang MS , Park SS ,Kong SS , Yu JA , Seo M, Li D , **Thakur SS**, Kim JM. Preparation of Highly Ordered Mesoporous TiO<sub>2</sub> Materials with Crystalline Framework from Different Mesostructured Silica Templates via Nano-replication *Chemistry Letters* 2008, 37, 140-141. (**Impact factor = 1.30**; ISSN No: **0366-7022**)
  9. Shrivas, K; Sahu, M; Patel, S; **Thakur, S**; Shankar, R Food safety monitoring of phenthoate pesticide using smartphone-assisted paper-based sensor with bimetallic Cu@Ag core-shell nanoparticles *Lab on a Chip* 2020, 20, 3996-4006. (**Impact factor = 5.399**; ISSN No. 0308-8146).
  10. Patel, S.; Shrivas K.; Sinha, D.; Monisha; Patle, T. K.; Yadav, S.; Thakur, S. S.; Deb M. K., Pervez S. Smartphone-integrated printed-paper sensor designed for on-site determination of dimethoate pesticide in food samples *Food Chemistry* , **2022**, 383, 132449-132453. (**Impact factor = 5.399**; ISSN No. 0308-8146).



## Recent Books/Book Chapters/Monographs etc.

1. **Thakur SS**, Patel D, Nirmalkar N, Thakur K and Patra G K Design And Development Of Bimetallic Enantioselective Salen Co Catalysts For The Hydrolytic Kinetic Resolution Of Terminal Epoxides, 4'th Chapter in Fundamentals and Prospects of Catalysis Goutam Kumar Patra and Santosh Singh Thakur (Eds.) 2020, Pub. Bentham Science e-Book .  
**ISBN: 978-981-14-5849-1 (Print),978-981-14-5851-4 (Online) DOI: 10.2174/97898114585141200101**
2. **Thakur SS**, Lee JE, Lee SH, Kim JM, Song CE. Heterogeneous Enantioselective Catalysis Using Inorganic Supports 2'nd Chapter pp. 25-72 in 'Handbook of Asymmetric Heterogeneous Catalysis' K Ding & Y. Uozumi (Eds.) Wiley-VCH Verlag, Weinheim, Germany First Edition Sept. 2008.  
**ISBN:978-352-73-1913-8 (Print) , 978-352-76-2301-3 (Online )DOI:10.1002/9783527623013**



## Research Supervision

- 📚 Ph. D.: 01 Guided
- 📚 Ph. D.: 02-Ongoing
- 📚 M. Phil: 02 Guided
- 📚 M Sc. 40 Students

## Administrative Responsibilities

- 📚 Member of School Board-School of Physical Sciences
- 📚 Worked as:
- 📚 HoD and Head of Department (I/c)

- ✚ Administrative Warden of Boys Hostel
- ✚ Member of Academic Council
- ✚ Member of Standing Committee of academic council
- ✚ Board of Studies (Chemistry)
- ✚ Degree Research Committee (Chemistry)
- ✚ Examination Board
- ✚ Centre and Asst Centre Suopdt of Examinations
- ✚ Observer of the University examinations
- ✚ Member of selection committee (for adhoc teacher)
- ✚ VC nominee for the various selection committee (for adhoc teacher)
- ✚ Program Officer of National Service Scheme (NSS), School of Physical Sciences
- ✚ Member of University Proctorial board
- ✚ Member of Anti-ragging committee
- ✚ Member of stationary committee
- ✚ Member for committee for Industry-Academia Interaction-School level
- ✚ Polling and Counting Officer of Student Council Election.
- ✚ First year co-ordinator.
- ✚ I/c Director at Shankaracharya Engg College Bhilai
- ✚ Academic Counselor
- ✚ Various committees constituted by the university and department time to time.

### **Additional Information:**

### **Editorial board member**

- ✚ International Journal of NanoScience and Nanotechnology (IJNN)
- ✚ International Journal of Chemistry and Applications (IJCA)
- ✚ Indian Journal of Chemistry and Application (IJCA)
- ✚ Guru Darshan, University RajbhashaPrakosth, Annual Magazine

### **Conference/ Seminar/Workshop Organized**

- ✚ Worked as Organizing Secretary of various National conference/ seminar/workshop
- ✚ Member of International Conferences
- ✚ Presented Papers on various international and National conference/ seminar/workshop as Invited speakers/Keynote speaker/Chaired the session/ Judges of various competitions.

### **Membership of Professional Bodies**

- ✚ Chemical Research Society of India (Life Member)
- ✚ Indian Chemical Society (Life Member)
- ✚ The Catalyst Society of India (Life Member)
- ✚ Indian Society for Technical Education (Life Member)
- ✚ American Chemical Society (2002-2008)
- ✚ Korean Chemical Society (Former Member)
- ✚ Indian Science Congress Association (Former Member)
- ✚ Korean Institute of Chemical Engineers (Former Member)