



Curriculum Vitae

Dr. SANTOSH KUMAR

Associate Professor,
Department of Chemistry,
Harcourt Butler Technical University,
Kanpur -208002, UP, India

Email: santoshk@hbtu.ac.in; santoshics@gmail.com

Nationality: Indian

Date of Birth: 12-04-1978

Father's Name: Mr. Shiv Shankar Shah

Area of research interest-

Synthetic Organic Chemistry / Biomaterials/ Polymeric Functional Material Chemistry/ NLO/ Nanotechnology/ Nanocomposites and its applications in hydrogen storage, CO₂ capture and conversion (Environment) and drug delivery (Biomedical), water remediation, dyeing.

Academic Qualification :

D. Phil. (2008) Chemistry from University of Allahabad (Central University), Prayagraj, India

M. Sc. (2004) Chemistry with specialization in Organic Chemistry from University of Allahabad (Central University), Prayagraj, India, 1st division with 75%

B. Sc. (2000) in Chemistry, Botany, Zoology from Ewing Christian College Allahabad; University of Allahabad (Central University), Prayagraj, India

I. Sc. (1996) from Uttar Pradesh Board, Allahabad, India, 1st division with 71%

10th High School (1994) from H. N. K. High School, Ara, Bihar School Examination Board, Patna, India, 1st division with 78%

Awards/honors/certificates

- ❖ Awarded InnoCentive Award 2019 (Challenge 9934214 “Seeking thermally stable colorants for orange polyesters”) by the Innovation Agency “InnoCentive” USA 17-05-2019.
- ❖ Awarded FCT Postdoctoral Fellowship 2012 (Portugal)
- ❖ Awarded CAS-TWAS Postdoctoral Fellowship 2008 (Italy-China)
- ❖ President, Chemistry Society, Motilal Nehru National Institute of Technology, Allahabad, India (2008-2009).
- ❖ Awarded outstanding contribution in reviewing Elsevier International Journal of Biological Macromolecules 2018
- ❖ Awarded outstanding contribution in reviewing Elsevier Spectrochimica Acta Part A: Molecular and Biomolecular Spectroscopy 2018

- ❖ Awarded outstanding contribution in reviewing Elsevier Journal of Molecular Graphics and Modelling 2018
- ❖ Awarded outstanding contribution in reviewing Elsevier Journal of Molecular Liquids 2018
- ❖ Awarded contribution in reviewing Elsevier Chemical Engineering Journal 2019
- ❖ Chaired session with Jerzy P. Lukaszewicz (Poland) in Third International Conference on Natural Polymers (ICNP-2012), October 26-28, 2012. Kottayam, Kerala, India
- ❖ Chaired session on 25th January 2022, International Conference on Materials, Machines & Information Technology, Amity University Jharkhand, Ranchi (24-25th January 2022).
- ❖ Portuguese Language Certificate 2015-2016.

Experiences:

1) Associate Professor

2022-present: Department of Chemistry, Harcourt Butler Technical University Kanpur, India

2) Research Professor/Senior Researcher: 6 Years

2017-2022: Division of Chemical Engineering, Department of Organic and Nano System Engineering, Konkuk University, Seoul, South Korea

3) Post-doctoral Research Experience: 9 years

2013-2017: Postdoctoral Fellow, Department of Chemistry, University of Coimbra, Coimbra, Portugal

2010-2013: Brain Pool Professor and Researcher, Department of Textile Engineering, Konkuk University, Seoul, South Korea

2009-2010: CAS-TWAS Postdoctoral Fellow Changchun Institute of Applied Chemistry, Chinese Academy of Sciences, Changchun, P. R. China

2008-2009: Research Associate (CSIR, New Delhi) Motilal Nehru National Institute of Technology, Allahabad, India

2007-2008: SRF-Extended (CSIR, New Delhi) MNNIT, Allahabad, India

4) Research Experience: Two years

2004-2006: Research Fellow UGC, University of Allahabad, Allahabad, India

5) Total Research Experience: 15 years

6) Teaching Experience: UG and PG teaching for 4 years.

7) Project (PI/Co-PI)

1. Title: A chitosan biopolymer for carbon-dioxide (CO₂) capture and conversion. Grant no. (2017-A019-0140) size: \$18000, Duration: May 01, 2017 – March 31, 2018. Completed.

2. Title: Development of bionanocomposites materials for removal of dye from industrial Wastewater. Grant (2018-A019-0103) size: \$18000, Duration: May 01, 2018-March 31, 2019. Completed.

3. Title: Development of porous structured mixed phase (anatase/brookite) metal oxide loaded TiO₂ nanoparticles for CO₂ capture and conversion. Grant (2018-A019-0588) size: \$18000; Duration: December 01, 2018-November 30, 2019. Completed

4. Title: Development of future human resources for solving current issues on chemical engineering, Grant (2019-A019-0560) size: \$6500; Duration: September 01, 2019-December 31, 2019 completed

5. Title: Polymerization and characterization of colored polyurethane containing a yellow azo dye moiety, Grant (2019-A019-0484) size: \$6500; Duration: September 1, 2019- February 29, 2020. Completed

6. Title: Thermodynamic and kinetic studies in dyeing of PET/PEG copolymer fibers, Grant (2019-A019-0266) size: \$10000; Duration: May 1, 2019- March 31, 2020. Completed

7. Title: Development of mesoporous zeolites@chitosan nanocomposites for selective gas (CO₂ and H₂) storage and catalytic activity. Grant (2019-A019-0112) size: \$22000; Duration: May 1, 2019- April 30, 2020. Completed

8. Title: Design and synthesis of high fastness disperse dyes and their application to athleisure wear containing high polyurethane elastic fiber. Grant (S202003S00131) size: \$62500; Duration: March 1, 2020- May 31, 2021. Completed

9. Title: Covalent organic framework-based chitosan biopolymer composite: Synthesis, characterization, and an efficient removal of dyes from aqueous solution. Grant (2020-A019-0179) size: \$20000; Duration: May 1, 2020- April 30, 2021. Completed

8) Patents: 1

1. Process for preparing chitosan-zeolite biocomposite, biocomposite prepared thereby and adsorbent comprising the same. Santosh Kumar, J. Koh, Application No. 10-2019-0160851. Date: 5-12-2019; Registration No. 1023026940000 Date: 9-9-2021

9) Master Thesis guided/co-guided: 3 (Completed) + 3 (Ongoing)

10) Ph.D. Thesis supervisor/co-supervisor

1. Dr. Shefali Jaiswal, “Nucleophilic Addition Mediated Chitosan Nanoplatfoms for Gene Transfection and Drug Delivery”. Ph.D. awarded on 22nd November **2021**.

2. Mr. Nazrul Hsan, “Carbonaceous based materials for CO₂ capture and conversion” (Ph. D. in progress).

Research papers Published: -

1. Journal papers: 101

2. International Conference/Symposium: 32

3. National Conference/Symposium: 24

4. Book Chapter: 08

5. Book: 02 (Publisher: Elsevier)

List of Book –

1. Role of chitosan and chitosan-based nanomaterials in plant sciences” editor Santosh Kumar, Sundar Madihally to be published by Elsevier. Publication Date: 01-August-22, ISBN: 9780323853910

2. Nanoparticles and plant-microbe interactions: An environmental perspective” Seena Sahadevan, **Santosh Kumar** to be published by Elsevier. Publication Date: 01-January-23, ISBN: 9780323906197

Selected List of Publications in Journals:

1. Synthesis and spectral properties of fluorescent phthalimidyldhydrazone disperse dyes and their dyeing application to poly(ethylene terephthalate), Keechul Youm, **Santosh Kumar**, J. Koh, *Fibers and Polymers*, in press **2022**. ISSN NO. 1229-9197 (**IF= 2.153**)
2. Insighting the systematic impact of shape, size and substitution of heteroatoms in quinoidal oligomers to tune their optoelectronic properties, F. Sarwar, S. Muhammad, S. Bibi, A. G Al-Sehemi, H. Algarni, **Santosh Kumar**, *Optical and Quantum Electronics*, 54, 356, **2022**, (**IF=2.084**) <https://doi.org/10.1007/s11082-022-03724-6>
3. Interaction of pseudohalides copper(II) complexes of hydrazide ligand with DNA: synthesis, spectral characterization, molecular docking simulations and superoxide dismutase activity, Abhay K. Patel, Neetu Patel, R. N. Jadeja, S. K. Patel, R. N. Patel, **Santosh Kumar**, and R. Kapavarapu, *Inorganic and Nano-Metal Chemistry*, 1-16, **2022**. ISSN: 2470-1564 (**IF=1.716**) <https://doi.org/10.1080/24701556.2022.2050755>
4. Arginine containing chitosan–graphene oxide aerogels for highly efficient carbon capture and fixation. Nazrul Hsan, P. K. Dutta, **Santosh Kumar***, J. Koh, *Journal of CO₂ Utilization*, 59, 101958, **2022**. ISSN NO. 2212-9820 (**IF= 7.132**)
5. Impacts of low concentrations of nanoplastics on leaf litter decomposition and food quality for detritivores in streams, S. Seena, I. B. Gutiérrez, J. Barros, Cláudia Nunes, João Carlos Marques, **Santosh Kumar**, Ana M.M. Gonçalves, *Journal of Hazardous Materials*, 429, 128320, **2022** ISSN: 0304-3894 (**IF= 10.588**)
6. Triazine based nanoarchitectonics of porous organic polymers for CO₂ storage. **Santosh Kumar**; A. Hassan; Neeladri Das; J. Koh, *Materials Letters*, 313, 131757, **2022**. ISSN: 0167-577X (**IF= 3.423**)
7. Synthesis, characterization, and application of chitosan-N-(4-hydroxyphenyl)-methacrylamide derivative as a drug and gene carrier, S. Jaiswal, P.K. Dutta, **Santosh Kumar***, J. Koh, M.C. Lee, J.W. Lim, S. Pandey, P. Garg, *International Journal of Biological Macromolecules* 195, 75-85, **2022**. ISSN NO. 0141-8130 (**IF= 6.953**).
8. Copper(II) hydrazone complexes derived from (Z)-N¹-(2-hydroxynaphthalen-1-yl)methylene)acetohydrazide: Synthesis, spectral characterization, electrochemical behaviour, density functional study, in vitro catalytic activity and molecular docking. A. K. Patel, R. N. Jadeja, N. Patel, R. N. Patel, S. K. Patel, R. J. Butcher, **Santosh Kumar**, G. Kumar, *Results in Chemistry* 4, 100244, **2022**. ISSN: 2211-7156
9. Experimental and computational study of naphthalimide derivatives: Synthesis, optical, nonlinear optical and antiviral properties, **Santosh Kumar**, S. Muhammad, S.S. Alarfaji, S. Yoon, M. Kim, K. Youm, M. Khalid, A.R. Chaudhry, J. Koh, *Optik*

- 246, 167748, 2021. ISSN: 0030-4026 (IF= 2.443)
<https://doi.org/10.1016/j.ijleo.2021.167748>
10. Synthesis of antibacterial disulfide derivatives and its computational molecular docking against penicillin binding protein, S. Kumar, M. Choudhary, G. Kumar, R.K. Singh, **Santosh Kumar**, *Analytical Chemistry Letters*, 11, 618-634, 2021 ISSN NO: 2230-7532 <https://doi.org/10.1080/22297928.2021.1948917>
 11. Synthesis and application of high-washability 4-amino-4'-fluorosulfonylazobenzene disperse dyes to cellulose diacetate for high color fastness, S. Yoon, H. Kim, N. Oh, S. Kim, **Santosh Kumar**, J. Koh, *Fibers and Polymers*, 22(11), 3075-3081, 2021. ISSN NO. 1229-9197 (IF= 2.153) <https://doi.org/10.1007/s12221-021-0839-7>
 12. Synthesis of 2,5-furandicarboxylic acid-enriched-chitosan for anti-inflammatory and metal ion uptake, **Santosh Kumar**, D. K. Mishra, S. Yoon, A. K. Chauhan, J. Koh, *International Journal of Biological Macromolecules*, 179, 500-506, 2021. ISSN NO. 0141-8130 (IF= 6.953). <https://doi.org/10.1016/j.ijbiomac.2021.03.036>
 13. Rapid determination of nitrate in brain regions and Cerebrospinal fluid of transient bilateral common carotid artery occlusion rat model by HPLC-UV, G. Kumar, S. Mukherjee, **Santosh Kumar**, Ranjana Patnaik, *Proceedings of the National Academy of Sciences, India Section A: Physical Sciences*, 91, 361-368, 2021 ISSN: 2250-1762. (IF=1.544) <https://doi.org/10.1007/s40010-020-00666-0>
 14. Chitosan modified by organo-functionalities as an efficient nanoplatform for anti-cancer drug delivery process, S. Jaiswal, P.K. Dutta, **Santosh Kumar**, Ruchi Chawla, *Journal of Drug Delivery Science and Technology* 62, 02407, 2021. ISSN NO. 1773-2247 (IF= 3.981) <https://doi.org/10.1016/j.jddst.2021.102407>
 15. Synthesis, characterization and functional properties of ZnO-based polyurethane nanocomposite for textile applications, **Santosh Kumar**, M.M. Rahman, S. Yoon, S. Kim, K.H. Hong, J. Koh, *Fibers and Polymers*, 22, 2227-2237, 2021. ISSN NO. 1229-9197 (IF= 2.153) <https://doi.org/10.1007/s12221-021-0815-2>
 16. Synthesis of copper (II) coordination complex, its molecular docking and computational exploration for novel functional properties: A dual approach, B. Mohan, S. Muhammad, A. G. Al-Sehemi, S. Bharti, **Santosh Kumar**, M. Choudhary, *Chemistry Select*, 6, 738-745, 2021. Online ISSN: 2365-6549 (IF= 2.109) <https://doi.org/10.1002/slct.202003738>
 17. COVID-19: Effect on environment and chitosan for environmental research, N. Hasan, **Santosh Kumar**, P.K. Dutta, *Asian Chitin Journal*, 16 (1), 23-30, 2020. ISSN NO. 0973-3345
 18. Utilization of zeolites as CO₂ capturing agents: Advances and future perspectives, **Santosh Kumar**, R. Srivastava, J. Koh, *Journal of CO₂ Utilization*, 41, 101251, 2020. ISSN NO. 2212-9820 (IF= 7.132) <https://doi.org/10.1016/j.jcou.2020.101251>
 19. Covid-19 - A perpetual pandemic! Can chitosan play an active role? S. Jaiswal, P.K. Dutta, **Santosh Kumar**, *Asian Chitin Journal*, 16 (1), 1-10, 2020. ISSN NO. 0973-3345
 20. Capture and chemical fixation of carbon dioxide by chitosan grafted multi-walled carbon nanotubes, N. Hasan, P.K. Dutta, **Santosh Kumar***, Neeladri Das, J. Koh,

- Journal of CO₂ Utilization*, 41, 101237, 2020. ISSN NO. 2212-9820 (IF= 7.132)
<https://doi.org/10.1016/j.jcou.2020.101237>
21. Substituted phenothiazines: Synthesis and in silico evaluation of D4 dopamine receptor inhibition, **Santosh Kumar**, G. Kumar, I.C. Shukla, *SN Applied Sciences*, 2, 1241, 2020. ISSN NO. 2523-3971. <https://doi.org/10.1007/s42452-020-3067-7>
 22. Highly efficient ternary hierarchical NiV₂S₄ nanosphere as hydrogen evolving electrocatalyst, R. Srivastava, J. Chattopadhyay, R. Patel, S. Agrawal, S. Nouseen, **Santosh Kumar**, S. Karmakar, *International Journal of Hydrogen Energy*, 45, 21308-21318, 2020. ISSN No 03603199. (IF= 5.816).
<https://doi.org/10.1016/j.ijhydene.2020.05.174>
 23. A systematic study on chitosan-liposome based systems for biomedical applications, **Santosh Kumar**, J. Dutta, P. K. Dutta, J. Koh, *International Journal of Biological Macromolecules*, 160, 470-481, 2020. ISSN NO. 0141-8130 (IF= 6.953).
<https://doi.org/10.1016/j.ijbiomac.2020.05.192>
 24. An experimental and computational study of pyrimidine based bis-uracil derivatives as efficient candidates for optical, nonlinear optical and drug discovery applications, B. Mohan, M. Choudhary, G. Kumar, S. Muhammad, Neeladri Das, R. K. Singh, A. G. Al-Sehemi, **Santosh Kumar**, *Synthetic Communications*, 50, 2199-2225, 2020 ISSN: 00397911 (IF= 2.007). <https://doi.org/10.1080/00397911.2020.1771369>
 25. Copper(II) and Nickel(II) complexes of tridentate hydrazide and Schiff base ligands containing phenyl and naphthalyl groups: Synthesis, structural, molecular docking and density functional study, N. Noorussabah, M. Choudhary, Neeladri Das, B. Mohan, K. Singh, R. K. Singh, K. Ahmad, S. Muhammad, **Santosh Kumar**, *Journal of Inorganic and Organometallic Polymers and Materials*, 30, 4426–4440, 2020 ISSN: 1574-1451 (IF= 3.543). <https://doi.org/10.1007/s10904-020-01610-w>
 26. Synthesis, characterizations, crystal structures, and theoretical studies of copper (II) and nickel (II) coordination complexes, B. Mohan, M. Choudhary, S. Muhammad, Neeladri Das, K. Singh, A. Jana, S. Bharti, H. Algarni, A. G Al-Sehemi, **Santosh Kumar**, *Journal of Coordination Chemistry*, 73, 1256-1279, 2020. ISSN: 00958972 (IF= 1.751). <https://doi.org/10.1080/00958972.2020.1761961>
 27. Synthesis and characterization of mono-6-deoxy-6-aminopropylamino-β-cyclodextrin polymer functionalized with graphene oxide, **Santosh Kumar**, M.M. Rahman, S. Yoon, S.M.M. Kabir, J. Koh, *Inorganic and Nano-Metal Chemistry*, 50 (4) 286-291, 2020. ISSN: 2470-1564 (IF=1.716)
<https://doi.org/10.1080/24701556.2019.1711124>
 28. Chitosan-based zeolite-Y and ZSM-5 porous biocomposites for H₂ and CO₂ storage, **Santosh Kumar**, R. Bera, Neeladri Das, J. Koh, *Carbohydrate Polymers*, 232, 115808, 2020. ISSN NO. 0144-8617 (IF= 9.381)
<https://doi.org/10.1016/j.carbpol.2019.115808>.
 29. Simple BODIPY dyes as suitable electron-donors for organic bulk heterojunction photovoltaic cells, A. Aguiar, J. Farinhas, W. Silva, M. Susano, M.R. Silva, L. Alcácer, **Santosh Kumar**, C.M.A. Brett, J. Morgado, A.J.F.N. Sobral, *Dyes and Pigments*, 172, 107842, 2020. ISSN: 0143-7208 (IF=4.889)
<https://doi.org/10.1016/j.dyepig.2019.107842>

30. Dyeing of polyester with 4-aryloxy-5-pyrazolone dyes containing fluoro sulfonyl group and application of environment-friendly after treatment for their high color fastness, S. Yoon, B. Choi, M.M. Rahman, **Santosh Kumar**, S.M.M. Kabir, J. Koh, *Materials*, 12, 4209-13, 2019. ISSN: 1996-1944 (IF= 3.623) <https://doi.org/10.3390/ma12244209>
31. Short-term exposure to low concentrations of copper oxide nanoparticles can negatively impact the ecological performance of a cosmopolitan freshwater fungus, S. Seená, **Santosh Kumar**, *Environmental Science: Processes & Impacts*, 21, 2001-2007, 2019 ISSN 2050-7895 (IF=4.238) <https://doi.org/10.1039/C9EM00361D>
32. Synthesis and characterization of g/Ni-SiO₂ composite for enhanced hydrogen storage applications. B. Krishnakumar, **Santosh Kumar**, M. Durai, M. Arivanandhan, J.M. Gil, A.J.F.N. Sobral, *International Journal of Hydrogen Energy*, 44(41), 23249-23256, 2019, ISSN: 0360-3199 (IF= 5.816) <https://doi.org/10.1016/j.ijhydene.2019.07.073>
33. CO₂ adsorption and conversion of epoxides catalyzed by inexpensive and active mesoporous structured mixed-phase (anatase/brookite) TiO₂, **Santosh Kumar**, D. K. Mishra, A.J.F.N. Sobral, J. Koh. *Journal of CO₂ Utilization* 34, 386-394, 2019. ISSN NO. 2212-9820 (IF= 7.132) <https://doi.org/10.1016/j.jcou.2019.07.019>
34. A combined experimental and computational study of 2,2'-(diazene-1,2-diylbis(4,1-phenylene))bis(6-(butylamino)-1H-benzo[de]isoquinoline-1,3(2H)-dion: Synthesis, optical and nonlinear optical properties, **Santosh Kumar**, S. Muhammad, J. Koh, M. Khalid, K. Ayub, *Optik*, 192, 162952, 2019. ISSN: 0030-4026 (IF= 2.443) <https://doi.org/10.1016/j.ijleo.2019.162952>
35. Bio-based chitosan/gelatin/Ag@ ZnO bionanocomposites: synthesis and mechanical and antibacterial properties, S. Murali, **Santosh Kumar***, J. Koh, S. Seená, P. Singh, A. Ramalho, A.J.F.N. Sobral, *Cellulose*, 26, 5347-5361, 2019. ISSN NO. 0969-0239 (IF= 5.044) <https://doi.org/10.1007/s10570-019-02457-2>
36. Syntheses, characterizations, crystal structures and efficient NLO applications of new organic compounds bearing 2-methoxy-4-nitrobenzeneamine moiety and copper (II) complex of (E)-N'-(3, 5-dichloro-2-hydroxybenzylidene) benzohydrazide, B Mohan, M. Choudhary, S. Bharti, A. Jana, N. Das, S. Muhammad, A.G. Al-Sehemi, H. Algarni, **Santosh Kumar**. *Journal of Molecular Structure*, 1190, 54-67, 2019 ISSN: 0022-2860 (IF= 3.196) <https://doi.org/10.1016/j.molstruc.2019.04.059>
37. Catalytic synthesis of 5-substituted tetrazoles: unexpected reactions and products, M.Y. Wani, B. Krishnakumar, M.R. Marques, **Santosh Kumar**, A.J.F.N. Sobral, *Journal of Heterocyclic Chemistry*, 56, 1613-1621, 2019 ISSN NO. 0022-152X (IF= 2.193). <https://doi.org/10.1002/jhet.3542>
38. Exploring the functional properties of trimethoxy-phenylpyridine as efficient optical and nonlinear optical material: A quantum chemical approach, A.R.Chaudhry, S. Muhammad, B.U. Haq, **Santosh Kumar**, A. G. Al-Sehemi, A. Irfan, A. Laref, A. Hussain, *Journal of Molecular Structure*, 1185, 268-275, 2019. ISSN: 0022-2860 (IF= 3.196) <https://doi.org/10.1016/j.molstruc.2019.02.102>

39. Methyl methacrylate modified chitosan: Synthesis, characterization and application in drug and gene delivery. S. Jaiswal, P.K. Dutta, **Santosh Kumar**, J. Koh, S. Pandey, *Carbohydrate Polymers*, 211, 109–117, **2019** ISSN NO. 0144-8617 (IF= **9.381**). <https://doi.org/10.1016/j.carbpol.2019.01.104>
40. Chitosan grafted graphene oxide aerogel: Synthesis, characterization and carbon dioxide capture study. N. Hsan, P. K. Dutta, **Santosh Kumar***, R. Bera, Neeladri Das, *International Journal of Biological Macromolecules*, 125, 300–306, **2019** ISSN NO. 0141-8130 (IF= **6.953**). <https://doi.org/10.1016/j.ijbiomac.2018.12.071>
41. Bio-based (Chitosan/PVA/ZnO) nanocomposites film: Thermally stable and photoluminescence material for removal of organic dye. **Santosh Kumar**, B. Krishnakumar, A.J.F.N. Sobral, J. Koh. *Carbohydrate Polymers*, 205, 559–564, **2019**. ISSN NO. 0144-8617 (IF= **9.381**). <https://doi.org/10.1016/j.carbpol.2018.10.108>
42. Can low concentrations of metal oxides and Ag loaded metal oxides nanoparticles pose a risk to stream plant litter microbial decomposers? A Jain, **Santosh Kumar**, S. Seena. *Science of the Total Environment*, 653, 930-937, **2019**. ISSN: 0048-9697 (IF= **7.963**) <https://doi.org/10.1016/j.scitotenv.2018.10.376>
43. A dual approach to study the key features of nickel (II) and copper (II) coordination complexes: synthesis, crystal structure, optical and nonlinear properties. B Mohan, A. Jana, N. Das, S. Bharti, M. Choudhary, S. Muhammad, **Santosh Kumar**, A.G. Al-Sehemi, H. Algarni, *Inorganica Chimica Acta*, 484, 148–159, **2019**. ISSN: 0020-1693 (IF= **2.545**) <https://doi.org/10.1016/j.ica.2018.09.037>
44. Self-assembly of Pt(II) based nanoscalar ionic hexagons and their anticancer potencies, A. Jana, S. Bhowmick, **Santosh Kumar**, K. Singh, P. Garg, N. Das, *Inorganica Chimica Acta* 484, 19-26, **2019**. ISSN: 0020-1693 (IF= **2.545**) <https://doi.org/10.1016/j.ica.2018.09.009>
45. Graphene oxide modified cobalt metallated porphyrin photocatalyst for conversion of formic acid from carbon dioxide, **Santosh Kumar***, R.K. Yadav, K. Ram, A. Antonio, J. Koh, A.J. F. N. Sobral, *Journal of CO₂ Utilization*, 27, 107-114, **2018**. ISSN NO. 2212-9820 (IF= **7.132**) <https://doi.org/10.1016/j.jcou.2018.07.008>
46. A novel design strategy for chitosan containing azo-based Schiff bases for colorimetric sensing of anions. N Nigam, **Santosh Kumar**, PK Dutta, T Ghosh, *Journal of Polymer Materials*, 35 (1), 137-148, **2018**. ISSN NO. 0970-0838 (IF= **0.320**) <https://search.proquest.com/docview/2091671320>
47. Mesoporous zeolite-chitosan composite for enhanced capture and catalytic activity in chemical fixation of CO₂, **Santosh Kumar**, K. Prasad, J.M. Gil, A.J. F. N. Sobral, J. Koh, *Carbohydrate Polymers*, 198, 401-406, **2018**. ISSN NO. 0144-8617 (IF= **9.381**) <https://doi.org/10.1016/j.carbpol.2018.06.100>
48. Enhanced fluorescence norfloxacin substituted naphthalimide derivatives: Molecular docking and antibacterial activity, **Santosh Kumar**, G. Kumar, A.K. Tripathi, S. Seena, J. Koh, *Journal of Molecular Structure*, 1157, 292-299, **2018**. ISSN: 0022-2860 (IF= **3.196**) <https://doi.org/10.1016/j.molstruc.2017.12.067>
49. Synthesis, characterization, optical and nonlinear optical properties of thiazole and benzothiazole derivatives: A dual approach, S. Muhammad[#], **Santosh Kumar**[#], J. Koh, M. Saravanabhavan, K. Ayub, M. Chaudhary, *Molecular Simulation*, 44(15),

- 1191-1199, **2018** (# **These authors have equal contribution to this work**). ISSN NO. 0892-7022 (**IF= 2.178**) <https://doi.org/10.1080/08927022.2018.1475737>
50. Highly active P25@Pd/C nanocomposite for the degradation of Naphthol Blue Black with visible light, B. Krishnakumar, **Santosh Kumar**, J.M. Gil, V. Pandiyan, A. Aguiar, A.J.F.N. Sobral, *Journal of Molecular Structure*, 1153, 346-352, **2018** ISSN: 0022-2860. (**IF= 3.196**) <https://doi.org/10.1016/j.molstruc.2017.09.120>
 51. Synthesis, physicochemical and optical properties of bis-thiosemicarbazone functionalized graphene oxide. **Santosh Kumar***, M.Y. Wani, C.T. Arranja, R.A.E. Castro, J.A. Paixão, A.J.F.N. Sobral, *Spectrochimica Acta, Part A: Molecular and Biomolecular Spectroscopy*, 188, 183-188, **2018**. ISSN NO. 1386-1425 (**IF= 4.098**) <https://doi.org/10.1016/j.saa.2017.06.045>
 52. Carbon dioxide adsorption and cycloaddition reaction of epoxides using chitosan-graphene oxide nanocomposite as a catalyst. **Santosh Kumar***, M.Y. Wani, J. Koh, J. Gil, A.J.F.N. Sobral, *Journal of Environmental Sciences*, 69, 77-84, **2018**. ISSN NO. 1001-0742 (**IF= 5.565**) <https://doi.org/10.1016/j.jes.2017.04.013>
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3. Furfuryl alcohol-A promising platform chemical, D.K. Mishra, **Santosh Kumar**, R. Shukla, Chapter X, In S. Saravanamurugan, H. Li, A. Riisager and A. Pandey (Eds.) **Biomass, Biofuels, Biochemicals: Recent advances in development of platform chemicals**, Elsevier, Amsterdam, Chapter 12, page 323-353, **2020**. Page 323-353, ISBN: 9780444643070
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Plenary/Keynote/Invited Talk

1. Chitosan biopolymer: Versatile biomedical applications. **Santosh Kumar**, Third International Conference on Natural Polymers (ICNP-2012), October 26-28, **2012**. Mahatma Gandhi University, Kottayam, Kerala, India
2. Optical study of chitosan biopolymer derivatives for biomedical applications. **Santosh Kumar**, National Seminar on Advances in Laser, Spectroscopy and Nanomaterials (NSALSN-2011), March 5-7, **2011**, Nehru Gram Bharati University, Allahabad.
3. Chitin and chitosan: Versatile biomedical and environmental applications. 12th January **2018** at Department of Chemistry, Amity School of Applied Sciences, Amity University Rajasthan, Jaipur.

4. Chitosan a waste-based biopolymer for environmental applications, Keynote speaker 8th Bihar Science Conference (An International Conference on Science and Technology) 2019, 4th December **2020**. Bihar Brain Society and Patna University, Patna.
5. Novel polymer of chitosan and biomass-derived furandicarboxylic acid for metal ion uptake: Synthesis and characterization, Invited Talk (APM 41) 12th March **2021**, 12th International conference on advancements in polymeric materials, 9th – 13th March 2021, Organized by SARP: LARPM, Bhubaneswar, Central Institute of Petrochemicals Engineering & Technology (CIPET) Bhubaneswar, Odisha.
6. Porphyrin: Color of Life, Plenary Talk (ICMMIT-2022), 25th January **2022**, International Conference on Materials, Machines & Information Technology, Amity University Jharkhand, Ranchi (24-25th January 2022).
7. Chitosan nanomaterials for sustainable agriculture, National symposium on recent trends in phytopathology to address emerging challenges for achieving food security, 22nd February 2022 Organized by ICAR-Vivekananda Parvatiya Krishi Anusandhan Sansthan Almora and Indian Phytopathological Society (IPS) New Delhi (21-22nd February **2022**).
8. Porphyrin: A versatile smart materials, Keynote speaker on the occasion of National Science Day 28th February **2022**, organized by Institute Innovation Council, Galgotias University, Greater Noida, UP

International Conference/Symposium /Proceeding of selected List of publication

1. Porphyrin: Color of Life, **Santosh Kumar** Plenary talk (ICMMIT-2022), 25th January **2022**, International Conference on Materials, Machines & Information Technology, Amity University Jharkhand, Ranchi (24-25th January 2022).
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3. Chitosan a waste-based biopolymer for environmental applications, **Santosh Kumar** Keynote speaker 8th Bihar Science Conference (An International Conference on Science and Technology) 2019, 4th December 2020. Bihar Brain Society and Patna University, Patna.
4. Fabrication of ZnO nanoparticle and chitosan-poly(vinyl alcohol) polymer composites with improved thermal and optical properties, **Santosh Kumar**, R. M. Morshedur, J. Koh, International Conference on "Advancements in Polymeric Materials" (APM 2018), was organized by Laboratory for Advanced Research in Polymeric Materials (LARPM), from February 02-04, **2018** at CIPET, Bhubaneswar.
5. Enhanced CO₂ capture of chitosan-zeolite composites for environmental applications. **Santosh Kumar**, J. Koh, R. M. Morshedur, A. J. F. N. Sobral, 24th

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6. High buffering capacity and low viscosity of chitosan derivative for enhanced transfection in cancer cells, Santosh Kumar, International conference on Biological sciences and Biostatistics, School of Science, UPRT Open University, Allahabad, 9-10 March **2017**
7. Synthesis, characterization and photoluminescence study of graphene oxide nanohybrid, **Santosh Kumar**, M. Y. Wani, A. J. F. N. Sobral, International Conference on Advancements in Polymeric Materials, organized by Laboratory for Advanced Research in Polymeric Materials (LARPM), CIPET at Ahmedabad during February 12-14, **2016**, Abstract code: APM 16099 (Accepted 2016).
8. Preparation and characterization of microporous chitosan-SiO₂ nanocomposites for biomedical applications. **Santosh Kumar**, M. Kumari, M. A. Mallick, Abilio J.F.N. Sobral. SETCOR International Conference on Smart Materials and Surfaces (SMS Bangkok 2014) 26-28th Aug 2014, Bangkok, Thailand.
9. 2-Acrylamido-2-Methylpropane Sulfonic acid grafted Chitosan for Efficient Transfection in Mammalian cells. P. Garg, **Santosh Kumar**, S. Pandey, Abilio J. F. N. Sobral, J. H. Chung. 5th International conference on Advanced Nanomaterials, 2-4 July, **2014**, Aveiro, Portugal, page no. 170, abstract no. 251.
10. Preparation and characterization of triphenyl amine porous polymer material for carbon dioxide capture in environmental applications. **Santosh Kumar**, J. A. Silva, B. Avula, M. Y. Wani, Carlos M. F. Dias, A. J.F.N. Sobral. International conference on structural and physical properties of solids "Smart materials at nano and micro scale" (SPPS 2013) November 18th-20th, 2013, Indian Institute of Technology (Indian School of Mines), Dhanbad India.
11. Eco-friendly synthesis and characterization of fluorescent N-naphthaloyl chitosan for biomedical applications. **Santosh Kumar**, Byunghun Choi, D. Kumar, J. Koh, BIT International Conclave 2013 on 'Innovations in Engineering & Management" (ICIEM 2013) 22nd-23rd February, 2013. BIT Mesra, Patna, India.
12. Preparation, characterization and biological activity of chitosan derivative, **Santosh Kumar**, Byunghun Choi, J. Koh, Accepted in Polychar 21, Gwangju, South Korea 2013.
13. Chitosan biopolymer: Versatile biomedical applications. **Santosh Kumar**, Third International conference on natural Polymers (ICNP-2012), IL 2, page 4-5, October 26-28, **2012**. MG University, Kottayam, Kerala, India
14. Physicochemical and circular dichroism properties of chitosan/methoxycinnamaldehyde. **S. Kumar**, J. Koh. International Conference on Nanomaterials and Nanotechnology, 18-21 Dec., 2011, University of Delhi, Delhi, India PP121, page 791.
15. Synthesis, optical and biological activity study of cs-chromone derivative. **Santosh Kumar**, H. Kim, Joonseok Koh, 3rd International conference on Heterocyclic Chemistry, Dec. 10-13, **2011**, Rajasthan University, Jaipur, India, OL-14.

16. Preparation, characterization and biological evaluation of a chitosan-chloroquinolaldehyde derivative. **Santosh Kumar**, H. Kim, J. Park, A. Singh, J. Koh, 11th Asian Textile conference, Nov. 1-4, **2011**, Daegu, South Korea.
17. Syntheses of chitosan-thymine conjugate for biomedical applications. **Santosh Kumar**, H. Kim, M. K. Gupta, P. K. Dutta, J. Koh, International Conference on Tissue engineering & regenerative medicine (ICTERM-2011), 27th Sept-2nd Oct. **2011** NIT, Rourkela, India.
18. Preparation of CNT-Chitosan biopolymer composites film for optical properties. **Santosh Kumar**, P. K. Dutta, 1st International Congress on Advanced Materials **2011**. 13-16 May 2011, Jinan, China. 11018, Page 340
19. Synthesis and characterization of chitosan-nucleobase conjugates for biomedical applications. **Santosh Kumar**, Hyerim Kim, B. Kumar, Joonseok Koh. 15th ISCB International Conference **2011**, 4th-7th Feb. at University of Saurashtra, Rajkot, India, PP 079, page 225.
20. Environment friendly technique for production of bioactive compounds and their future prospects. Brajesh Kumar, **Santosh Kumar**, Rajkamal, R. N. Pathak, Se Won Park. International Conference on Radiation, Environment and Health (ICREH-2010) 19-21st Nov. **2010**.
21. Preparation of chitosan-based silver nanocomposites by a facile method. N. Nigam, **Santosh Kumar**, T. Ghosh, P. K. Dutta, Proceeding of ICOP 2009- International Conference on Optics and Photonics CSIO, Chandigarh, India 30 Oct- 1Nov. **2009**, p-139, page 1-4.
22. Preparation and characterization of azo-based chitosan biopolymer towards investigation of thermal and optical properties. **Santosh Kumar** and P. K. Dutta. International conference on Hi-Tech materials (ICHTM 09) 11th -13th February **2009**, IIT Kharagpur (India).
23. Synthesis and Evaluation of chitosan-EDTA derivative for adsorption study. P.K.Dutta, **S. Kumar**. 8th International conference of the European Chitin Society (EUCHIS 07) Antalya, Turkey. P.113 page 177, 8-11 Sept.**2007**.
24. Physio-chemical studies of Adsorption on chitosan complexes for waste waters. **Santosh Kumar**, Joydeep Dutta and P. K. Dutta. International Conference on Emerging trends in chemical Sciences (ICETCS2007) University of Mumbai, Mumbai, India.OP-34, p66 Jan.23-25, **2007**.
25. Application of Chitosan-EDTA Derivatives for Removal of Toxic metal ions from aqueous solution. P. K. Dutta, J. Dutta and **Santosh Kumar**. 10th International chitin & chitosan conference. Montpellier, France, Sept. 6-9, **2006**.

National Conference/Symposium selected List of publication

1. Synthesis, characterization and application of chitosan-N-(4-hydroxyphenyl)-methacrylamide derivatives for drug delivery system”, Shefali Jaiswal, P. K. Dutta and **Santosh Kumar**; presented poster presentation in the 57th Annual Convention of Chemists (ACC), Indian Chemical Society (ICS) held at Dept. of Chemical Sciences, IISER Kolkata from 26h to 29th December, 2020

2. Quercetin loaded arginine-folate functionalized chitosan/graphene oxide nanocomplexes as an effective antioxidant and antibacterial agent”, Shefali Jaiswal, Prabha Bhartiya, P.K.Dutta & **Santosh Kumar**; selected poster presentation in conference: Polymers: Usefulness & current concerns, Dec.23-24,2018 and student got best Poster Presentation Award.
3. Preparation, characterization and photoluminescence study of chitosan derivative aerogel for biomedical applications, **Santosh Kumar**, J. Koh. National Seminar on “Research in Chemistry: Existing Trends and its Relevance” P. G. Department of chemistry, Gaya College, Gaya.2012
4. Optical study of chitosan biopolymer derivatives for biomedical applications. **Santosh Kumar**, J. Koh, P. K. Dutta, National Seminar on Advances in Laser, Spectroscopy and Nanomaterials (NSALSN-2011), IT-019, page 25, March 5-7, 2011. Nehru Gram Bharati University, Allahabad
5. Preparation, characterization and optical properties of new azo-dye chitosan biopolymer. N. Nigam, **Santosh Kumar**, T. Ghosh, P. K. Dutta. o.p. 14; Proceeding of Ist Indian chitin and chitosan symposium (1st ICCS-2010), April, 2010.
6. Cyano based Chitosan Derivative: Nd-YAG Laser for Second Harmonic Generation (SHG) Study. **Santosh Kumar**, S. P. Singh, L. Mishra, P. K. Datta and P. K. Dutta. Meghnad Saha Memorial Symposium on Emerging Trends in Laser & Spectroscopy and Applications, University of Allahabad, Allahabad. PLS-12, page 123, March 23-25, 2009.
7. Preparation of N-heterocyclic Chitosan Derivatives for Improving Biological Activity. **Santosh Kumar**, P. K. Dutta National Seminar on POLYMER SCIENCE & TECHNOLOGY-VISION & SCENARIO Faculty of Engineering & Technology, JMI Delhi P015 December 3, 2008.
8. Preparation of microwave assisted 3-formyl-10H phenothiazine and chitosan based films for possible optical properties. **Santosh Kumar**, Pradip Kumar Dutta and Prasanta Kumar Datta. National Symposium for materials research scholars-MR08, Indian Institute of Technology Bombay, page-113, 17-18 May, 2008.

International and National Conferences / Seminar / Workshop Attended-

1. 41st Annual Convention of Chemists Indian Chemical Society University of Delhi, Delhi Dec.23-27, 2004.
2. 9th National conference on “Bioactive Heterocycles and Drug Discovery Paradigm” 8-10th Jan.2005 at Saurashtra University, Rajkot, Gujrat (India).
3. International Symposium on Recent Trends in Drug Discovery.8-10, Jan. 2005 at Saurashtra University, Rajkot, Gujrat (India).
4. Vayganik tatha takniki sabdawali ayog, hindi vigyan patrikarita sabdawali karyasala 11-12 April, 2005. Allahabad.
5. 93rd Indian Science Congress. ANGRAU, Hyderabad. Jan.3-7th, 2006.
6. IUPAC Sponsored Second International Symposium on Green / Sustainable Chemistry University of Delhi, Delhi.Jan.10-13, 2006.
7. 42nd Annual Convention of Chemists. Visva-Bharti Santiniketan Feb.9-13, 2006.

8. 10th International Conference of ISCB on Drug Discovery: Perspectives and challenges and International Satellite Symposium on Medicinal plants and Obesity and Cardiovascular Disease at CDRI, Lucknow (India) 24-26 Feb. **2006**.
9. National agricultural chemists' conference xxxvii & xxxix Annual conventions of Indian Society of Agricultural chemists Allahabad, Nov.27-28th, **2006**.
10. International Workshop on Frontiers in Nanobiotechnology. Center of Biotechnology, University of Allahabad, Allahabad (India) 1st Dec. **2006**.
11. International Seminar on Liquid Crystals: Synthesis and characterization. 13th Dec. **2006**. University of Allahabad, Allahabad.
12. Expert Lecture on the Theme: Recent Trends in chemical Sciences at MN National Institute of Technology, Allahabad. Dec.14, **2006**.
13. International Conference on Emerging trends in chemical Sciences (ICETCS2007) University of Mumbai, Mumbai, India. Jan.23-25, **2007**.
14. Indo-Polish Workshop on Liquid Crystals: Synthesis, Characterization and Molecular Engineering. 12th Dec. **2007**, University of Allahabad, India.
15. National Symposium on recent advances in microbial biofertilizers production & utilization technology. 13-14th Dec. **2007**, University of Allahabad, Allahabad, India.
16. Seminar on frontiers of chemistry research at Allahabad University, Jan.24-25, **2008**.
17. National symposium for materials research scholars MR08, IIT Bombay, India. 17-18th May **2008**.
18. International Conference on Hi-Tech Materials (ICHTM-2009), IIT Kharagpur, India. 11-13th February **2009**.
19. Meghnad Saha Memorial Symposium on Emerging Trends in Laser & Spectroscopy and Applications (MMSETLSA-2009) March 23-25, **2009**.
20. 15th ISCB International Conference **2011**, 4th-7th Feb. at Rajkot, India.
21. National Seminar on Advances in Laser, Spectroscopy and Nanomaterials (NSALSN-2011), March 5-7, **2011** at Nehru Gram Bharti University, Allahabad, India.
22. 3rd International conference on Heterocyclic Chemistry, Dec. 10-13, **2011**, Jaipur, India
23. International Conference on Nanomaterials & Nanotechnology, 18-21 Dec., **2011**, University of Delhi, Delhi, India
24. Third International conference on natural Polymers (ICNP-2012), Mahatma Gandhi University, Kottayam, Kerala, India October 26-28, **2012**.
25. BIT International Conclave 2013 on 'Innovations in Engineering & Management' (ICIEM 2013) 22nd-23rd February, **2013**. BIT, Mesra, Patna
26. MicroCal TM VP-ITC & ITC 200 workshop Departamento de Química Universidade de Coimbra, Rua Larga, 3004-535 Coimbra, 30-31 July, **2013**. GE Health Care Life Science.
27. Workshop on NMR Focus 2013: MNova 8 Suite, Processing and Spectral Analysis. 10th -11th September, **2013**. University of Coimbra, Coimbra, Portugal
28. Superfícies poliméricas e nanopartículas de hidrogéis inteligentes: aplicações específicas Prof. Adley Forti Rubira Universidade Estadual de Maringá, Brasil, 27 de Novembro de **2013**, University of Coimbra, Portugal.

29. Workshop Produtos Naturais: aplicações (bio) tecnológicas. 19th February, **2014**. Instituto Politecnico de Coimbra, Portugal.
30. 1st Seminar on Organically Modified Silica Aerogels (Aero-ORMOSIL 2014) 19th March, **2014**, Department of Chemical Engineering, University of Coimbra, Portugal.
31. Workshop on NMR Basics, Theory, Processing and Analysis Sept.30-3rd Oct. **2014**. UC NMR Core facility, University of Coimbra, Coimbra, Portugal.
32. Seminar on Novos Desafios em Cromatografia Gasosa, Paralab, Coimbra, 27-05-**2015**.
33. 2015 Summer School in Computational Biology, From Molecules to Tissues, Coimbra, 2nd -11th September **2015**. Center for Neurosciences and Cell Biology, University of Coimbra, Coimbra, Portugal.

Association with scientific bodies

- ❖ Editor-in Chief, Journal of Biological Engineering Research and Review (2016-till dt)
- ❖ Associate Editor, Asian Chitin Journal (2013-till date)
- ❖ Guest Associate Editor in Nano-Based Drug Delivery (2022 to present)
- ❖ Guest Associate Editor in Polymeric and Composite Materials (2021 to present)
- ❖ Editorial Board Member, Current Smart Materials (benthamscience.com)
- ❖ Editorial Board Member, Current Applied Polymer Science (benthamscience.com)
- ❖ Editorial Board Member, International Journal of Biomedical Engineering (2013 to till)
- ❖ Editorial Team Member, Green Chemistry & Technology Letter
- ❖ Editorial Board Member, EC Microbiology
- ❖ Editorial Board Member, Journal of Biomedical Engineering and Informatics (JBEL)
- ❖ Editorial Board Member, Advanced Scientific Research (2016)
- ❖ Editorial Board Member, Edelweiss Chemical Science Journal (2018)
- ❖ International Advisory Board Member, Journal of Advanced Pharmaceutical Technology & Research (2010-2012).
- ❖ AEEC Member of The European Energy Centre (EEC) - United Kingdom, 2014
- ❖ Associate Member of The European Chitin Society, (2014-00-380)
- ❖ Member of Local Advisory Committee, NSALSN-2011 March 5-7, 2011. N.G.B University, Allahabad, India.
- ❖ Advisory Board Member ICBCES 2014
- ❖ International Advisory Board, International Conference on Biological Sciences and Bio-Statistic (ICBS) 2017
- ❖ Life Member of Indian Chemical Society, India F/6696 (LM) (2006)
- ❖ Member of Indian Science Congress Association, India
- ❖ Member of Gandhi Prathna Samaj Ewing Christian College Allahabad, India
- ❖ Member of UK Carbon Capture and Storage Research Centre (UKCCSRC)
- ❖ Member of **Royal Society of Chemistry, UK** 2015 membership no. 579993
- ❖ Member of European Biotechnology Network 2016
- ❖ Member of Portuguese Chemical Society, Portugal 2016 (membership no. 5668)
- ❖ Member of the International Zeolite Association 2017

- ❖ **Guest Editor** for Special Issue on Recent Advances in Synthesis, Characterization, and Application of Liposomes as Drug Carriers. **Journal of Nanomaterials**, IF 1.980.
- ❖ **Guest Editor:** Polymeric and Composite Materials section; Topic: Next Generation Natural and Synthetic Filler-based Polymer Nanocomposites, M. Goyat , T. K. Gupta , K. Kumar, S. Kumar and **Santosh Kumar**, **Frontiers in Materials**, IF 2.705.
- ❖ **Guest Editor:** [Molecules] Special Issue "Chitin and Chitosan of Molecules: Versatile Ecological, Industrial, and Biomedical Applications. **Santosh Kumar**, S. Pandey, ISSN: 1420-3049 **Molecules** IF 4.412.
- ❖ **Guest Editor:** [Computers, Materials & Continua] Special issue” Advancement in Biomaterials & Smart Materials for healthcare”. Gaurav Kumar, **Santosh Kumar**, Arvind Kumar ISSN: 1546-2226. Publisher: Tech Science Press (United States). SCI: 2020 Impact Factor 3.772
- ❖ **Topic Editor:** Highlights in Nano-Based Drug Delivery 2021/22 **Santosh Kumar**, Rajiv Lochan Tiwari, Helena F. Florindo, **Frontiers in Medical Technology**
- ❖ **Guest Editor:** [Catalysts] Special Issue "Methods and Applications for Enhancing the Catalytic Activity of Metal Nanoparticles". B. Kumar, **Santosh Kumar**, Himanshu Ojha, Alexis Debut, ISSN 2073-4344 **Catalysts** IF 4.146.

Reviewer: I have served as reviewer for various National and International journals such as Journal of Material Chemistry B, Biomaterials Science, Analyst, RSC Advances, Nanoscales, Materials Science and Engineering B, International Journal of Biological Macromolecules, Bioorganic & Medicinal Chemistry, Industrial Crops and Products, Chemical Engineering Journal, Process Biochemistry, Chemistry: A European Journal, International Journal of Polymeric Materials, Plant Systematic and Evolution, Cellulose, Biological Trace Element Research, Proc. Nat. Acad. Sci. India Section B: Biological Sciences, Journal of Polymer Research, Ecotoxicology and Environmental Safety, Polymer Environment , Material Chemistry and Physics, Journal of Drug Delivery Science and Technology, Spectrochimica Acta Part A: Molecular and Biomolecular Spectroscopy, ACS, MDPI, ChemistrySelect etc.