Dr. UMA K.

Assistant Professor, Department of Chemistry, SIT, Tumakuru
Contact: +91 9886737680
Email: umak@sit.ac.in
Vidwan ID: 90795
Scopus ID: 57190429862
OrcID: 0000-0001-7812-5477
Faculty ID: SIT0204

Education

	Degree	Year	Institute	Specialization
1	Ph.D.	2020	Visvesvaraya Technological University, Belagavi	Applied Science
2	M.Sc.	2007	Kuvempu University, Shankaraghatta	Industrial Chemistry
3	B.Sc.	2005	Gulbarga University, Gulbarga	Physics, Mathematics, Chemistry (PCM)

Professional Experience

	Date (from-to)	Designation	Organization
1	01-01-2011 to till date	Assistant Professor	Siddaganga Institute of Technology
2	01-08-2008 to 31-12-2010	Lecturer	Siddaganga Institute of Technology

Affiliations of Professional organizations

- Member of Global Professors Welfare Association Forums, Karnataka.

Courses Taught

Undergraduate Courses

- Engineering Chemistry
- Engineering Chemistry Lab
- Chemistry for EEE/ME/CSE streams
- Instrumental Methods of analysis

- Environmental Studies
- Organic Chemistry Lab
- Technical Chemistry Lab
- Research Methodology, Biosafety and Bioethics
- Biology for Engineers

Research Areas

- Peptidomimetics
- Nanomaterials
- Biomaterials

Publications

Journals

1. Development of biochar using herbal industry waste for removal of hexavalent chromium from aqueous solution: Column study, Suman Pawar, **Uma K.**, Thomas Theodore, Results in Chemistry, 2024, 10, 101713. DOI: https://doi.org/10.1016/j.rechem.2024.101713.

2. Green synthesis of Zinc Oxide nanoparticles, antibacterial studies and investigation as catalyst for the conversion of pumpkin oil into biodiesel, Rudreshappa G.E., Sreenivasa S., **Uma K.**, Manjunatha S., Aruna Kumar D.B., Research Journal of Chemistry and Environment, 2024, 28(1):121-132. DOI:10.25303/281rjce1210132.

3. Novel Hybrid ZnO Nanoparticles Entrapped Aqua Zeolite Matrix for Controlled Release of Fertilizer for Sustainable Growth of Plants, **Uma K.**, B.E. Bhojaraja, Thanuja M.Y., Kavitha B.C., Thanusha K.N., BioNanoScience, 2023, 13 (4), 1-11. DOI: 10.1007/s12668-023-01225-8.

4. Column study using modified banana pseudo stem as adsorbent for removal of Pb (II), Suman Pawar, Shridhar Bagali, **Uma K.**, B.S. Gowrishankar, Heliyon, 2023, 9, e15469. DOI: https://doi.org/10.1016/j.heliyon.2023.e15469.

5. Bioadhesives for clinical applications – a mini review, **Uma K.**, Materials Advances, 2023, 4, 2062–2069. DOI: https://doi.org/10.1039/D2MA00941B.

6. TiO_2/g-C_3N_4 composites for the removal of chromium in wastewater, **Uma K.**, Suman Pawar, Results in Chemistry, 20235, 100743. DOI: https://doi.org/10.1016/j.rechem.2022.100743.

7. Synthesis and characterization of biologically active *N*-protected formamides employing Nano TiO_2 and their utilization for the synthesis of thioformamides, **K. Uma**, H. S. Lalithamba, B.C. Revanasiddappa, Chemical Data Collections, 2020, 30, 100591, 1-11. DOI:10.1016/j.cdc.2020.100591.

8. Dehydrosulfurization of protected thioureas to carbodiimides employing $(Boc)_2O$ and DMAP, **K. Uma**, H. S. Lalithamba, Chemical Data Collections, 2020, 27, 100378,1-5. DOI: https://doi.org/10.1016/j.cdc.2020.100378.

9. Synthesis of terminal thiazoles from *N*-protected amino acids and study of their antibacterial activities, H. S. Lalithamba, **K. Uma**, T. S. Gowthami, G. Nagendra, Organic Preparations and Procedures International, 2020, 52, 3, 181-191. DOI: https://doi.org/10.1080/00304948.2020.1721959

10. A facile synthesis of hydroxamic acids of N^{α}–protected amino acids employing BDMS, study of their molecular docking and antibacterial activities, **K. Uma**, H.S. Lalithamba, V. Chandramohan, K. Lingaraju, Organic Preparations and Procedures International, 2019, 51, 161–174.DOI:10.1080/00304948.2019.1579039.

11. Capsicum annuum fruit extract: A novel reducing agent for the green synthesis of ZnO nanoparticles and their multifunctional applications, Lalithamba H.S., Raghavendra M., **Uma K.**, Yatish K.V., Mousumi Das, Nagendra G., Acta Chimica Slovenica, 2018, 65, 354–364. DOI:10.17344/acsi.2017.4034.

12. Synthesis of N^{α}–protected aminoacid/peptide Weinreb amides employing N,N'-carbonyldiimidazole as activating agent; studies on docking and

antibacterial activities, **K. Uma**, H.S. Lalithamba, M. Raghavendra, Vivek Chandramohan, C. Anupama, Archive for Organic Chemistry (Arkivoc), 2016, iv, 339-351. DOI: http://dx.doi.org/10.3998/ark.5550190.p009.605.

Conference Proceedings

1. Synthesis of N^{α}-protected diazomethylketones using , COMU and its utilization in the preparation of bromomethylketones and selenazoles, H.S. Lalithamba, **K. Uma**, M. Raghavendra, International journal of Innovative Research & Development, 2016, 5, 11, ISSN 2278 – 0211, 129-135.

Book Chapters

1. Synthesis and characterization of molecularly imprinted polymers, IOP Publishing Ltd., 2023. Online ISBN: 978-0-7503-4962-8; Print ISBN: 978-0-7503-4960-4. https://doi.org/10.1088/978-0-7503-4962-8.

Reviewer of Journals

1. Journal of Materials Chemistry B

Editor/ Reviewer of Journal

1. Journal of Materials Chemistry B

Invited Lectures, talks and workshops

1. Presented the work on the Synthesis of TiO_2 /g-C_3N_4 composites with enhanced photocatalytic activity, at International Conference on Materials Science and Engineering (ICMSE)- 2022 on 11th -12th June 2022 at Dr B R Ambedkar National Institute of Technology, Jalandhar.

2. Presented the work on the Preparation of Biochar using industrial waste and its applications, at International Conference on Health, Energy and Materials, ICHEM- 2022 on 28th & 29th April 2022 at Hindustan Institute of Technology and Science Chennai, Tamilnadu - 603103.

3. Presented the work on the Novel green synthesis of Copper oxide nanoparticles: Catalyst for the conversion of Aeglemarmelos seed oil into Biodiesel, at MagIC+ - Magnetism, Interactions and Complexity on 5th – 7th July 2021 Poznan, Poland.

4. Presented the work on the Green synthesis of Zinc oxide nanoparticles, antibacterial studies and investigation as a catalyst for the conversion of pumpkin oil into Biodiesel, at International conference on Nanoscience and Nanotechnology (ICONN 2021) on 1st–3rd February 2021 at SRM Institute of Science and Technology, Kattankulathur.

5. Presented the work on the CaO Nanoparticles prepared by combustion assisted facile green synthesis and its utilization as a catalyst for the synthesis of N-Fmoc/Z- protected tetrazole analogues on 27th February 2020 at REACT'20, R.V. College of Engineering, Bangalore.

6. Presented the work on the Green Synthesis of ZnO nanoparticles and their applications for the synthesis of *N*-protected formamides and formamide esters and their biological activities in the national conference, on Synthetic and biological peptides: Structures and strategies for the development of drugs, biologics and materials on 14th & 15th March 2019 at Bangalore University, Central College Campus, Bangalore.