

Dr. Sumit K. Jangra

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Department of Chemistry
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EDUCATIONAL QUALIFICATIONS

- **2016: Ph.D.** Chemistry
Indian Institute of Technology (IITR) Roorkee, India.
Title: Design, Synthesis and Biological Evaluation of Novel Flavonoid Derivatives. Thesis Advisor: **Dr. Naseem Ahmed**
- **2012: MSc,** Organic Chemistry
Department of Chemistry, Maharshi Dayanand University, Rohtak, India, 72%.
- **2010: BSc,** Chemistry, Botany, Zoology
Maharshi Dayanand University, Rohtak, India, 75.2%.
- **2007: Intermediate,** CBSE, New Delhi, 82.8%.
- **2005: High School,** HBSE, Bhiwani, 85.3%.

FELLOWSHIPS

- **2012:** CSIR-Junior/Senior Research Fellowship.
Chemical Sciences, CSIR-JRF Rank-68.
- **2013-GATE** (Chemistry)

TEACHING EXPERIENCE

- B.Tech (Ist): Engineering Chemistry (ECH-1)
- M.Sc. (Ist), B. Tech (Ist) and M. Tech (Ist): Laboratory Practical Classes

AREA OF RESEARCH

- Heterocycles synthesis: Synthesis of functionalized heterocyclic compounds of medicinal relevance
- Multicomponent reaction: Design of new MCRs chemistry
- Green Chemistry: Development of new and greener protocols for organic synthesis

CURRENT RESEARCH

My research interests lie within the area of synthetic organic methodology, Organic Synthesis & Catalysis, Novel Reactions, Development of new catalytic reactions of broad synthetic utility, Synthesis of molecules of pharmaceutical and biological significance, Green protocols in Organic Synthesis.

PUBLICATIONS

1. **S. Kumar**, N. Ahmed, “ β -Cyclodextrin/IBX in water: highly facile biomimetic one pot deprotection of THP/MOM/Ac/Ts ethers and concomitant oxidative cleavage of chalcone

- epoxides and oxidative dehydrogenation of alcohols”, *Green Chem.*, **2016**, 18, 648.
2. N. Verma, **S. Kumar**, N. Ahmed, “A facile access to novel heterocyclic analogs of chalcone from newly synthesized ketone containing isoxazole and benzoxazinone ring”, *RSC Adv.*, **2016**, 6, 51183.
 3. N. Verma, **S. Kumar**, N. Ahmed, “Asymmetric Synthesis of 3-Benzofuranones through 5-Exo-trig Cyclization of 4-Nitroaryl Olefins”, *Tetrahedron lett.*, **2016**, 57, 3547.
 4. Shaily, A. Kumar, **S. Kumar**, N. Ahmed ‘Naked-eye’ colorimetric/fluorimetric detection of F⁻ ions by biologically active 3-((1H-indol-3-yl)methyl)-4-hydroxy-2H-chromen-2-one derivatives”, *RSC Adv.*, **2016**, 6, 108105.
 5. **S. Kumar**, N. Verma, S. Zubair, S. M. Faisal, S. Kazmi, S. Chakraborty, M. Owais, N. Ahmed, “Design and synthesis of novel non-steroidal Phytoestrogen based probes as potential biomarker, evaluation of anticancer activity and docking studies”, *J. Heterocycl. Chem.*, **2016**, (manuscript accepted).
 6. **S. Kumar**, N. Verma, I. Parveen, N. Ahmed, “A Green, Solvent-Free, Microwave-Assisted, High-Yielding YbCl₃ Catalyzed Deprotection of THP/MOM/Ac/Ts Ethers of Chalcone Epoxide and 2'-Aminochalcone and Their Sequel Cyclization”, *J. Hetrocycl. Chem.*, **2016**, 53, 2111.
 7. **S. Kumar**, N. Verma, N. Ahmed, “Microwave assisted highly efficient one-pot multi-component synthesis of novel 2-(tetrasubstituted-1H-pyrrol-3-yl)-4H-chroman-4-ones catalysed by heterogeneous silica gel supported Polyphosphoric acid”, *Journal of Saudi Chemical Society*, **2016**, Ahead of print.
 8. **S. Kumar**, N. Verma, N. Kumar, A. Patel, P. Roy, V. Pruthi, N. Ahmed, Design, “Synthesis, Molecular docking and Biological studies of Novel Phytoestrogen-Tanaproget hybrids”, *Synth. Commun.*, **2016**, 46, 460.
 9. **S. Kumar**, N. Ahmed, “A facile approach for the synthesis of novel 1-oxa and 1-aza-flavonyl-4-methyl-1H-benzo[d][1,3]oxazin-2(4H)-ones by microwave enhanced Suzuki–Miyaura coupling using bidentate chromen-4-one-based Pd(II)–diimine complex as catalyst”, *RSC Adv.*, **2015**, 5, 77075.
 10. **S. Kumar**, Alok Patel, N. Ahmed, “Microwave-assisted expeditious and efficient synthesis of novel quinolin-4-yl methoxychromen-2- and -4-ones catalyzed by YbCl₃ under solvent free one-pot three components domino reaction and their antimicrobial activity”, *RSC Adv.*, **2015**, 5, 93067.
 11. **S. Kumar**, N. Verma, N. Ahmed, “β-Cyclodextrin in water: highly facile biomimetic one pot deprotection of phenolic THP/MOM/Ac/Ts ethers and concomitant regioselective cyclization of chalcone epoxides and 2 0-aminochalcones”, *RSC Adv.*, **2015**, 5, 85128.
 12. **S. Kumar**, N. Konduru, N. Verma, N. Ahmed, “β-Cyclodextrin in Water: Highly Versatile and Green Approach for Biomimetic Regioselective Ring Opening of Chalcone Epoxides with Nitrogen Heterocycles”, *Synth. Commun.*, **2015**, 45, 2555.

PROJECT

Title: Radiopharmaceutical chemistry and Molecular Imaging Research

No. DAE-599-CMD

INR 28,00,000/-

Institute: IIT Roorkee

As Junior/Senior Research Fellow

Funding Agency: BRNS

(Completed)

CONFERENCES/WORKSHOPS/WEBINARS ATTENDED

1. “18th CRSI National Symposium In Chemistry” organized by Institute of Nano Science and Technology and Punjab University during 5th-7th February, **2016**.
 2. “Symposium on Modern Trends in Inorganic Chemistry-XV” held at the Department of Chemistry, IITR, Roorkee during 13-16 December, **2013**.
 3. Attended one day workshop on “Novel Thermoelectric Materials” organized by Department of Chemistry, IIT Roorkee on 5 March, **2016** under QIP programme.
 4. “How to review a manuscript: the reviewing process” organized by Elsevier Publishing Campus on 23 February, **2016**.
 5. Attended one day workshop on "Author Workshop on Book Publishing" organized by Elsevier and Mahatma Gandhi Central library, IIT Roorkee on September 26, **2016**.
 6. Attended one day workshop on “Scopus and Mendeley” organized by Mahatma Gandhi Central library, IIT Roorkee on March 10, **2015**.
 7. Attended one day workshop on “Nano Drug Delivery Systems (Industry-Academia Interaction)” organized by Centre of Excellence: Nanotechnology, Indian Institute of Technology Roorkee, Roorkee on January 10, **2015**.
 8. “How to get published in the Chemical Sciences” organized by Elsevier Publishing Campus on 25 December, **2015**.
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