

CURICULUM VITAE



Personal

Name: Anil Kumar

Sex: Male

Postal Address: School of Biotechnology, Faculty of Sciences,
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Academic and Professional Carrier:

1. Currently Assistant Professor at the Shri Mata Vaishno Devi University, Katra
2. **PDF:** Department of Chemistry, Texas A&M University, College Station-Texas, USA, September 2014-September 2015 with Professor John A. Gladysz
3. **Ph. D.:** University of Jammu, Jammu 2008, with Professor Kamal K. Kapoor
4. **M. Phil.:** Department of Chemistry, University of Jammu, Jammu, 2002 with Professor C. S. Andotra

Areas of Interest /Specialization:

1. **Synthetic/Heterocyclic /Medicinal Chemistry.**
2. **Chiral-at-Metal Octahedral Complexes for Enantioselective Organic Synthesis**

Experience:

1.	Assistant Professor in Chemistry at SoBT, Faculty of Science, SMVDU Katra-J&K.	2007-Present
2.	Post-doctoral Fellow, Department of Chemistry, Texas, A&M University, USA.	September 2014 – September 2015
3.	No. of Doctorate students Guided/pursuing	Guided-1, Pursuing 4
4.	Number of PG Projects Guided	11
5.	Number of B. Tech. Projects guided.	8
6.	Number of Publications in International Journals	17
7.	Number of Publications in National Journals	2

Visits Abroad

1. **Texas, USA** Visiting Professor at Department of Chemistry, Texas A&M University, College Station, Texas, USA during 2014-2015 (One Year) and worked on project entitled “Werner Complexes as Hydrogen Bond Donor Catalysts for Enantioselective Synthesis.”
2. **Denver, Colorado USA**: To attend 249th AMERICAN CHEMICAL SOCIETY NATIONAL MEETING during March 22-26 2015.
3. **Boston, MA, USA**: To attend 250th AMERICAN CHEMICAL SOCIETY NATIONAL MEETING during August 16-20, 2015.
4. **Amsterdam, Netherland**: To attend 2nd European Organic Chemistry Congress, during March 02-03 2017 in Amsterdam, Netherland.

Research Projects Undertaken:

S. No.	Role	Title	Funding Agency	Current Status
1	PRINCIPAL INVESTIGATOR	ENANTIOSELECTIVE SYNTHESIS AND BIOLOGICAL SCREENING OF SOME NEW B-BLOCKERS	UNIVERSITY GRANTS COMMISSION, GOVT. OF INDIA	COMPLETED AND FINAL REPORT SUBMITTED IN 2015.

Research Publications in International Journals (All SCI, Total Impact Factor = 50, Average Impact Factor = 2.94):

1. Aqueous mortar-pestle grinding: an efficient, attractive and viable technique for the regioselective synthesis of β -amino alcohols, Nasseb Singh, Vijai K. Rai and **Anil Kumar***, *Comptes Rendus Chimie* 2017, Accepted.
2. Parteek Kour, Varun P. Singh, Tajinder Singh and **Anil Kumar*** Al(III) Chloride catalyzed Multi-Component Domino Strategy: Synthesis of Library of Dihydropyrimidines and Tetrahydropyrimidines and Tetrahydropyrimidines, *Tetrahedron Letter* 58, , 2017, 4179-4185.
3. Parteek Kour, Rashmi Sharma, Reena Chib and **Anil Kumar*** and Vijai K. Rai. Synthesis of 2-amino-4H-chromen-4-ylphosphonates and β -phosphonomalonates via Tandem Knoevenagel-phospha-Michael reaction and antimicrobial evaluation of newly synthesized β -phosphonomalonates, *Res. Chem. Intermed.* 43, 2017, 7319-7329.
4. Subrata K Ghosh, Kyle G Lewis, **Anil Kumar**, John A Gladysz, Syntheses of Families of Enantiopure and Diastereopure Cobalt Catalysts Derived from Trications of the Formula $[\text{Co}(\text{NH}_2\text{CHArCHArNH}_2)_3]^{3+}$, *Inorganic Chemistry*, 56, 2017, 2304-2320.
5. Parteek kour, **Anil Kumar*** and Vijai K. Rai Aqueous microwave-assisted DMAP catalyzed synthesis of β -phosphonomalonates and 2-amino-4H-chromen-4-ylphosphonates via a domino Knoevenagel-phospha-Michael reaction, *Comptes Rendus Chimie* 20, 2017, 140-145.
6. **Anil Kumar***, shivali jamwal, Shahaba Khan, Nasseb Singh and Vijai K. Rai, $\text{Bi}(\text{NO}_3)_3 \cdot 5 \text{H}_2\text{O}$ catalyzed phosphorylation of aldehydes: an efficient route to α -hydroxyphosphonates, *Phosphorus, Sulfur, and Silicon and the Related Elements*, 192 (3), 2017, 381-385.
7. Richa Sharma, Varun P Singh, Deepika Singh, Farnaz Yusuf, **Anil Kumar**, Ram A Vishwakarma, Asha Chaubey, Optimization of nonribosomal peptides production by a psychrotrophic fungus: *Trichoderma velutinum* ACR-P1, *Applied Microbiology and Technology* 100 (2016), 9091-9102.
8. Alamgir A Dar, Nisar A Dangroo, Arun Raina, Arem Qayum, Shashank Singh, **Anil Kumar**, Payare L Sangwan, Biologically active xanthenes from *Codonopsis ovate*, 132 (2016), 102-108.
9. **Anil Kumar**, Subrata K. Ghosh, and John A. Gladysz, Tris(1,2-diphenylethylenediamine)cobalt(III) Complexes: Chiral Hydrogen Bond Donor Catalysts for Enantioselective α -Aminations of 1,3-Dicarbonyl Compounds. *Org. Lett.*, 2016, 18 (4), 760-763.

10. Alamgir A. Dar, Santosh K. Rath, Afnan Qaudri, Buddh Singh, Sheikh A. Tasduq, **Anil Kumar**, Payare L. Sangwan, Isolation, cytotoxic evaluation, and simultaneous quantification of eight bioactive secondary metabolites from *Cicermicrophyllum* by high-performance thin-layer chromatography. *J. Sep. Sci.* 2015, 00, 1–8.
11. Alamgir A. Dar, Payare L. Sangwan, Imran Khan, Nidhi Gupta, Afnan Qaudri, Sheikh A. Tasduq, Surinder Kitchlu, **Anil Kumar**, Surrinder Koul, Simultaneous quantification of eight bioactive secondary metabolites from *Codonopsis 4vate* by validated high performance thin layer chromatography and their antioxidant profile, *Journal of Pharmaceutical and Biomedical Analysis*, 2014, 100, 300–308.
12. Vijai K. Rai, Nihar Sharma and **Anil Kumar**, *Synlett*, The First I₂ promoted Efficient Aminoacetylation of Activated Aziridines in Ionic Liquids. 24, 97-101, **2013**.
13. Vijai K. Rai, Roopali Sharma and **Anil Kumar**, Masked amino acid a new C-nucleophile for I₂-catalyzed stereoselective ring opening of epoxides in ionic liquid *Tetrahedron Letter*, 54, 1071-1075, **2013**.
14. Vijai K. Rai, Priya Tiku, **Anil Kumar**, An Efficient Ce(III)-Catalyzed *Cis*-Selective Synthetic Approach to γ -Lactones in Aqueous Media *Synthetic communication*, 3(6):369-374, **2012**.
15. Vijai K. Rai, Prashant Kumar Rai, Swati Bajaj and **Anil Kumar**, An unprecedented synthesis of γ -lactams via mercaptoacetylation of aziridines in water, *Green Chem.*, 13, 1217-1223, **2011**.
16. Indu Bhushan, **Anil Kumar**, Gourav Modi, Subika Jamwal, Chiral resolution of differently substituted racemic acetyl-1-phenyl ethanol using lipase from *Bacillus subtilis* Indu Bhushan, *Journal Of Chemical Technology and Biotechnology* Volume 86, issue 2, pp 315-318, Feb. **2011**.
17. **Anil Kumar**, Satish Kumar and Kamal K. Kapoor, Zinc-Mediated Reductive Cyclodimerization of α,β -Unsaturated Aryl Ketones Under Aqueous Conditions, *Aust. J. Chem.* 60, 1-3, **2007**.

Book Chapters Publications:

1. Jyotsna Sharma, Vivek K. Singh, **Anil Kumar**, Raju Shankarayan and Sharada Mallubhotla. Role of Silver Nanoparticles in Treatment of Plant Diseases In: *Microbial Biotechnology: Application in Food and Pharmacology*, Volume 2; Eds. **Springer Science**, **2018** (Accepted for publication).
2. Anuja Koul, **Anil Kumar***, Vivek K. Singh, Durgesh K. Tripathi and Sharada Mallubhotla, Exploring Plant-Mediated Copper, Iron, Titanium and Cerium Oxide Nanoparticles and Their Impacts. **Elsevier Academic Press**, **2018**: Chapter 8, pp 175-194.

3. Vivek K. Singh, Vinay Kumar, Ram Prakash, Jittender Sharma, **Anil Kumar** and Prashant Singh Recent Developments and Applications of Novel Analytical Techniques for Analysis of Plant Materials, **Nova Publishers, New York, 2016**, Chapter 3, pp 17-44.

International/National Presentations:

1. **International:** Syntheses of Families of Enantiopure and Diastereopure Octahedral Cobalt Catalysts and their utility in Organic Synthesis February 8-10, 2017: 23rd ISCB international conference (ISCBC-2017) on Interface of Chemical Biology in Drug Research, SRM University, Kattankulathur, Tamil Nadu, India.
2. **National:** Synthesis and Spectroscopic Analysis of Chiral Octahedral Complexes, February 15- 17, 2017: National Conference on Recent Advances on Materials Science and Spectroscopy organized by Department of Physics, SMVD University in Collaboration with Laser and Spectroscopy Society of India.
3. **International:** Chiral Octahedral Complexes as catalyst for enantioselective organic synthesis, March 2-3, 2017: 2nd European Organic Chemistry Conference, Amsterdam, Netherlands.
4. **International:** Werner Complexes as chiral hydrogen bond donor catalyst for enantioselective synthesis” February 7, 2016: 22nd ISCB international conference (ISCBC-2016), Recent trends in Affordable and sustainable drug discovery and developments, Uka Tarsadia University, Surat, Gujarat, India.
5. **International:** Chiral Werner Complexes as hydrogen bond donor catalysts for enantioselective organic syntheses August 16-20, 2015: 250th American Chemical Society National Meeting, Boston, MA, USA.
6. **International:** Ring opening chemistry of epoxides with new carbon nucleophiles for the synthesis of novel γ -lactone and γ -lactams March 22-26, 2015: 249th American Chemical Society National Meeting, Denver, CO, USA.
7. **National:** New Protocols for the *Cis*-Selective Synthesis of γ -Lactones in Aqueous Conditions, February 27-28 2014: National Conference on Recent Trends in Chemical and Environmental Sciences Arni University, Kathgarh (Indora), Kangra (H.P).
8. **National:** Environment Friendly Synthesis and Kinetic Resolution of α -Hydroxyphosphonates by Lipase, October 5- 6, 2013: National conference on Energy, Environment and Biotechnology Research Department of Biotechnology, Mewar Institute, Ghaziabad.
9. **International:** A mild and efficient method for the regioselective epoxide ring opening February 20-22, 2010: 11th International Conference of International Academy of Physical Sciences (CONIAPS XI) organized by the Allahabad University, Allahabad.

10. **National:** New Protocols for the Cis-Selective Synthesis of γ -Lactones in Aqueous Conditions.
11. **National:** An Expedient Synthesis of Polysubstituted Imidazoles, October 21-22, 2011: National Symposium on Chemistry Innovations for Human Well Being (CHIW 2011) organized by Department of Chemistry, Himachal Pradesh University Shimla.
12. **National:** New routes for the Synthesis of tetrazolopyrimidines, November 18-20, 2010: National Symposium on New Trends in Material Research ISCAS Institute of Solid State and materials Science, Jammu University Campus, Jammu.
13. **National:** Expedient synthesis of functionalized tetrahydropyridines September, 22-24, 2011: Chemical Research Society of India, North Zone meeting, organized by department of Chemistry, University of Jammu.
14. **National:** Synthesis and biological activity of Pyrazoles, 2008, 3rd J&K Science Conference, University of Jammu and State DST.

Award and Honours:

S. No.	Title	Activity/Event	Awarded by	Year
1	Raman Post Doctoral Fellowship	Visiting Fellow at Department of Chemistry, Texas A&M University, College Station-Texas, USA	University Grant Commission, Govt. of India	September 2014 – September 2015
2	Best Oral Presentation Award	J&K Science Congress	Jointly by University of Jammu and J&K State DST.	2008
3	Qualified National Eligibility Test (NET)	-	CSIR	2002
4	Qualified Graduate Aptitude Test (GATE)	-	Ministry of HRD	2002

Membership of Academies/Societies

1. Life Member Indian council of Chemists.
2. Member American Chemical Society 2015-2016.