

Curriculum Vitaé

Dr. Venkatesh V

Assistant Professor

Department of Chemistry

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Educational and Professional Qualifications

Assistant Professor (2019- Till date)	Department of Chemistry Indian Institute of Technology Roorkee
DST-INSPIRE faculty (April 2017-2019)	Inorganic and Physical Chemistry (IPC) Indian Institute of Science, Bangalore
Post-Doctoral Fellow (2015-2017)	Supervisor: Professor Peter J Sadler Department of Chemistry University of Warwick, UK
Ph. D. (2009 - 2014)	Supervisor: Professor Sandeep Verma Department of Chemistry Indian Institute of Technology Kanpur, Kanpur-208016, India
Graduate Course (2009)	Department of Chemistry, IIT, Kanpur, India CPI: 8.33/10
M. Sc. (2006–2008)	Anna University, India CPI: 8.3/10
B. Sc. (2003–2006)	Gobi Arts and Science College, India Aggregate marks: 88%

Fellowships and Awards

April 2017-Till date	DST-INSPIRE faculty award from DST, Government of India
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2015- 2017	Newton International Fellowship awarded jointly by The Royal Society and The British Academy
2014	Eli Lilly and Company Asia Outstanding Thesis Award
2011– 2014	Senior Research Fellowship Indian Institute of Technology-Kanpur, India
2009 – 2011	Junior Research Fellowship Indian Institute of Technology-Kanpur, India
2008	NET Examination, University Grants Commission, India (JRF-chemical sciences).

Research Experiences

- Designed highly fluorescent noble metal nanoclusters and explored their application as a delivery vehicle/ targeting agents in biology.
- Synthesised photoactivatable metal complexes for therapeutic applications. We have designed prodrugs that are only active in the presence of light.
- Studied metal-nucleobase interaction by using X-ray crystallography for designing novel metal organic frameworks.
- Studied the structural alignment of nucleobase functionalized SWCNTs and MWCNTs by using AFM, SEM and TEM techniques.

Teaching Experience

- Currently teaching “**IP311: Bio and Medicinal Inorganic Chemistry**” course along with Prof. G. Mughesh at the department of Inorganic and Physical Chemistry (IPC), Indian Institute of Science, Bangalore.
- I have taught under graduate tutorial courses for two semesters at Indian Institute of Technology Kanpur and one semester during my post-doctoral research programme.

Publications

Independent Research from IISc Bangalore:

1. Krishnendu T Prakash, Namrata Singh and **V.Venkatesh***, “Synthesis of novel luminescent copper nanoclusters with substituent driven self-assembly and aggregation induced emission (AIE)” *Chem. Comm.*, **2019**, 55, 322–355.

Publications from Ph. D and Postdoc:

1. H. Shi, Q. Wang, **V. Venkatesh**, G. Feng, L. S. Young, I. Romero-Canelón, M. Zeng and P. J. Sadler “Photoactive platinum(IV) complex conjugated to a cancer-cell-targeting cyclic peptide” *Dalton Trans.*, **2019**, 48, 8560–8561.
2. H. Shi, I. R. Canelón, M. Hreusova, O. Novakova, **V. Venkatesh**, A. Habtemariam, G. J. Clarkson, J. Song, V. Brabec, and P. J. Sadler, “Photoactivatable Cell-Selective Dinuclear trans-Diazidoplatinum(IV) Anticancer Prodrugs” *Inorg. Chem.*, **2018**, 57, 14409–14420.
3. **V. Venkatesh**, R. B. Martin, C. J. Wedge, I. R. Canelón, C. S. Cano, J. Song, J. P. C. Coverdale, P. Zhang, G. J. Clarkson, A. Habtemariam, S. W. Magennis, R. J. Deeth and P. J. Sadler. “Mitochondria-targeted spin-labelled luminescent iridium anticancer complexes” *Chem. Sci.*, **2017**, 8, 8271-8278.
4. **V. Venkatesh**, N. K. Mishra, I. R. Canelón, R. R. Vernooij, H. Shi, J. P. C. Coverdale, A. Habtemariam, S. Verma, and P. J. Sadler. “Supramolecular Photoactivatable Anticancer Hydrogels” *J. Am. Chem. Soc.*, **2017**, 139, 5656–5659.
5. R. K. Saravanan, P. Saha, **V. Venkatesh**, T. G. Gopakumar, and S. Verma. “Coordination-Controlled One-Dimensional Molecular Chains in Hexapodal Adenine–Silver Ultrathin Films” *Inorg. Chem.*, **2017**, 56, 3976–3982.
6. **V. Venkatesh**, M. D. Bala Kumaran, R. Kamal Saravanan, P. T. Kalaichelvan, S. Verma. “Luminescent Silver–Purine Double Helicate: Synthesis, Self-Assembly and Antibacterial Action” *ChemPlusChem*, **2016**, 81, 1266–1271.
7. **V. Venkatesh**, C. J. Wedge, I. R. Canelón, A. Habtemariam, P. J. Sadler. “Spin-labelled photo-cytotoxic diazido platinum(IV) anticancer complex” *Dalton Trans.*, **2016**, 45, 13034–13037.
8. C. M. Moyon, **V. Venkatesh**, K. Vijaya Krishna, F. Bonachera, S. Verma, A. Bianco. “Self-Assembly of Tyrosine in to controlled Supramolecular Nanostructures” *Chem. Eur. J.* **2015**, 21, 11681-11686.
9. S. Kandambeth, **V. Venkatesh**, D. B. Shinde, S. Kumari, A. Halder, S. Verma, R. Banerjee. “Self-templated chemically stable hollow spherical covalent organic framework” *Nature Commun.*, **2015**, 6, Article No. 6786.

10. G. Das, B. P. Biswal, S. Kandambeth, **V. Venkatesh**, G. Kaur, M. Addicoat, T. Heine, S. Verma, R. Banerjee. “Chemical Sensing in Two Dimensional Porous Covalent Organic Nanosheets” *Chem. Sci.*, **2015**, *6*, 3931–3939.
11. A. Mukherjee, M.A. Barnett, **V. Venkatesh**, S. Verma, P. J. Sadler. “Human serum transferrin fibrils: nanomineralisation in bacteria and destruction of red blood cells” *ChemBioChem*, **2015**, *16*, 149–55.
12. B. Mohapatra, **V.Venkatesh**, S. Verma. “Crystal Engineering with 2-Aminopurine Containing a Carboxylic Acid Pendant” *Cryst. Growth Des.*, **2014**, *14*, 5042–5052.
13. R. Das, M. K. Sharma, V. K. Rao, B. K. Bhattacharya, I. Garg, **V.Venkatesh**, and S. Upadhyay. “An electrochemical genosensor for Salmonella typhi on gold nanoparticles-mercaptopilane modified screen printed electrode” *J. Biotechnol.* **2014**, *188*, 9–16. (DOI: 10.1016/j.jbiotec.2014.08.002).
14. **V. Venkatesh**, P. Pachfule, R. Banerjee and S. Verma. “Evolution of an adenine-copper cluster to a cuboidal framework: snapshots of its solution phase ripening and gas adsorption properties” *Chem. Eur. J.* **2014**, *20*, 12262–12268.
15. **V. Venkatesh**, A. Shukla, S. Sivakumar, and S. Verma. “Purine-Stabilized Green Fluorescent Gold Nanoclusters for Cell Nuclei Imaging Applications.” *ACS Appl.Mater.Interfaces.* **2014**, *6*, 2185–2191.
16. N. Nagapradeep, **V.Venkatesh**, S. K. Tripathi, and S. Verma. “Guanine copper coordination polymers: crystal analysis and application as thin film precursors.” *DaltonTrans.* **2014**, *43*, 1744–1752.
17. P.Singh, **V. Venkatesh**, N. Nagapradeep, S.Verma and A. Bianco. “G-quartet type self-assembly of guanine functionalized single-walled carbon nanotubes.” *Nanoscale* **2012**, *4*, 1972–1974.
18. **V. Venkatesh**, J. Kumar and S. Verma. “Adenine containing architectures from silver supported dimeric units.” *CrystEngComm* **2011**, *13*, 6030–6032.
19. P. Singh, F.M. Toma, J. Kumar, **V. Venkatesh**, J. Raya, M. Prato, S. Verma, and A. Bianco. “Carbon Nanotube–Nucleobase Hybrids: Nanorings from Uracil-Modified Single-Walled Carbon Nanotubes.” *Chem. Eur. J.* **2011**, *17*, 6772 – 6780.

20. K. B. Joshi, V. Venkatesh and S. Verma. “Biotin interaction with human erythrocytes: contact on membrane surface and formation of self-assembled fibrous structures.” *Chem. Commun.* **2010**, 46, 3890–3892.

Book/Book Chapter

- V. Venkatesh and Peter J. Sadler, Platinum(IV) Prodrugs, **Metal Ions in Life Sciences**, Volume 18, Edited by Astrid Sigel, Helmut Sigel, and Roland K. O. Sigel; Walter de Gruyter GmbH, Berlin, Germany; **2018**.

Symposia Proceedings

- “**Metallo drugs for Therapeutic Applications**” presented at Newton Fund Researcher Link Workshop on Peptides, Proteins and Metals in Disease and Therapy at IIT Kanpur, India, during November 6-8, 2017. (**Oral Presentation**)
- “**Material and biological aspects of metal-purine derivatives**” presented at chemical biology cluster organized by department of chemistry, University of Warwick, UK (28th May 2015).(**Oral Presentation**)
- Indo-French Symposium (**Functional Metal-Organics: Applications in Materials and Catalysis**) held at NISER Bhubaneswar from 24 – 26 February, 2014. (**Poster Presentation**)
- *ChemFest* symposium organized by Chemistry Department, IIT Kanpur, India (1st Sep, 2012). (**Participated**)
- “**Interaction of biomolecules with erythrocytes**” presented at *The Konstanz Research School Chemical Biology Retreat* organised by University of Konstanz, Konstanz, Germany (8-10th Aug, 2012).(**Oral Presentation**)
- Medicinal Chemistry conference (**MedChem-2011**) held at IIT Madras from 27-29 October, 2011.(**Poster Presentation**)
- *ChemFest* symposium organized by Chemistry Department, IIT Kanpur, India (31st Oct, 2009). (**Participated**)

Personal Details

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References

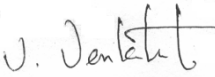
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Testimony

I hereby declare that the information given above is true to the best of my knowledge and belief.


Venkatesh V