

Curriculum Vitae

Name : Dr. Anup Nandkishor Kate
Place of work : Department of Chemistry, MES, Abasaheb Garware College, Pune
Position : Assistant Professor
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Educational Qualification

07/2011-12/2016 **Ph.D. (Chemistry)** at Department of Chemistry, Savitribai Phule Pune University
Research Guide: Dr. (Mrs.) Anupa A. Kumbhar, Assistant Professor,
PhD topic : ‘Anthracene-anchored Copper Complexes: Cellular Uptake and Cytotoxicity studies.’

06/2006-05/2008 **Master of Science in Analytical Chemistry (M. Sc.)**
Result: First Class, Abasaheb Garware College affiliated to Savitribai Phule Pune University, Pune, India.

06/2003-05/2006 **Bachelor of Science in Chemistry (B. Sc.),**
Result: First Class, Abasaheb Garware College affiliated to Savitribai Phule Pune University, Pune, India

Work Experience

05/2010-11/2016 **Research Fellow**, Department of Chemistry, Savitribai Phule Pune University

09/2008-05/2010 **Research Chemist** at Mint Biofuels Ltd. Pune

Responsible for

- Development of new methods for synthesizing biodiesel
- Performed Impurity testing of raw materials and in process samples
- Provide support to the Production and QC department for maintaining good quality of finished product
- Analyzing the experimental results and preparing standard reports

Awards Received

1. **Senior Research Fellowship(SRF)**–Council of Scientific and Industrial Research. (10/2014-10/2016)
2. **Junior Research Fellow (JRF)** on BRNS, DAE sponsored project “Photochemical and radiation interaction of water soluble Anthracene Derivatives with DNA” May, 2010 to March 2013
3. Qualified **GATE-2011** (Graduate Aptitude Test in Engineering)

International Research Visit

- Visited Institute for **Inorganic and analytical chemistry, University of Leipzig, Germany**, under DST-DAAD-PPP Programme.

Research Interests

- ❖ Synthesis and Characterization of Transition Metal Complexes
- ❖ Pulse Radiolysis
- ❖ Metal Complex–Biomolecules interactions
- ❖ Photochemistry
- ❖ Targeted Drug Delivery

Experimental Skills and Instrumental Acquaintance

1. Expertise in various **chromatographic techniques** (Thin layer and column chromatography, HPLC, GC)
2. **Spectroscopic techniques** like NMR, FT-IR, Absorption & Fluorescence, Circular dichroism Spectroscopy (**CD**), Single crystal X-ray diffraction (**XRD**), Dynamic laser scattering (**DLS**) & Time Correlated Single Photon Counting (**TCSPC**)
3. Cyclic voltammetry
4. Elemental analysis and Electron Spray Ionization Mass Spectrometry
5. Gel electrophoresis
6. **Linear Electron Accelerator (LINAC)** at National Center For Free Radical Research, Department of Chemistry, Savitribai Phule Pune University, Pune, India

Publications

1 Targeting AKT2 in MDA-MB-231 Cells by Pyrazole Hybrids: Structural, Biological and Molecular Docking Studies, Sanjay S. Gaikwad, Snehal K. Nimal, Rushikesh Pol, Datta Markad, Amardeep R. Jadhao, Umesh Jadhav, Anup N. Kate, Rajesh N. Gacche, Limbraj R. Patil, Rajeev C. Chikate, Chemistry and Biodiversity, 2023, 20, e202300799

2. Synthesis, structural characterization, protein binding, DNA cleavage and anticancer activity of fluorophore labelled copper (II) complexes based on 1, 8-naphthalimide conjugates, Sabiha A Shaikh, Satish S Bhat, Pooja

L Hegde, Vidyanand K Revankar, Anup Kate, Deepti Kirtani, Anupa A Kumbhar, Vijay Kumbhar, Kishore Bhat, *New Journal of Chemistry*, 2021, 45, 16319-16332

3. Aryl 1H -imidazole [4,5f][1,10] phenanthroline Cu (II) complexes: Electrochemical and DNA interaction studies, Bharati S. Rajebhosale, Shivali N. Dongre, Sameer S. Deshpande, **Anup N. Kate**, *J. Inorg. Biochem.*, **2017**,**175**,**129-137**

4. Fluorescent Zinc(II) complexes for gene delivery and simultaneous monitoring of protein expression, Anupa A. Kumbhar, Lalita B. Rane, **Anup N. Kate**, Shefali N. Ramteke, Bhupendra V. Shrivage and Prasad P. Kulkarni, *Dalton Trans*, **2016**,**45**, **16984-16996**

5. Antiproliferative activity of ruthenium(II) arene complexes with mono- and bidentate pyridine-based ligands Stefan Richter, a Sushma Singh, Dijana Draca, **Anup N. Kate**, Anupa Kumbhar, Avinash S. Kumbhar, Danijela Maksimovic-Ivanic, Sanja Mijatovic, Peter Lönnecke and Evamarie Hey-Hawkins. *Dalton Trans.* **2016**, **45**, **13114-13125**.

6. Antiproliferative activity of bicyclic benzimidazole nucleosides: synthesis, DNA-binding and cell cycle analysis Vyankat A. Sontakke, Pravin P. Lawande, **Anup N. Kate**, Ayesha Khan, Rakesh Joshi, Anupa A. Kumbhar and Vaishali S. Shinde, *Org. Biomol. Chem.*, **2016**, **14**, **4136-4145**.

7. Copper(II) mixed-ligand polypyridyl complexes with doxycycline - structures and biological evaluation, Olufunso O. Abosede, Nilima A. Vyas, Sushma B. Singh, Avinash S. Kumbhar, **Anup N. Kate**, Anupa A. Kumbhar, Ayesha Khan, Andrea Erxleben, Peter Smith, Carmen de Kock, Frank Hoffman, Joshua A. Obaleye, *Dalton Trans.* **2016**, **45**, **3003-3012**

8. Synthesis and biological evaluation of copper(II) pyrenethiosemicarbazone, Suwarna A. Ingle, **Anup N. Kate**, Anupa A. Kumbhar, Ayesha A. Khan, Soniya S. Rao and Shridhar P. Gejji, *RSC Advances*, **2015**, **5**, **47476-47487**.

9. Synthesis, DNA interaction and anticancer activity of 2-anthryl substituted benzimidazole derivatives, Vyankat A. Sontakke, **Anup N. Kate**, Sougata Ghosh, Piyush More, Rajesh Gonnade, Navanath M. Kumbhar, Anupa A. Kumbhar, Balu A. Chopade and Vaishali S. Shinde, *New J. Chem.* **2015**,**39**,**4882- 4890**

10. Monitoring cellular uptake and cytotoxicity of copper (II) complex using a fluorescent anthracene thiosemicarbazone ligand, **Anup N. Kate**, Anupa A. Kumbhar, Ayesha A. Khan, Pranaya V. Joshi and Vedavati G. Puranik, *Bioconjugate Chemistry*, **2014**, **25**, **102-114**.

11. Interaction of hydrated electron with anthraldehyde thiosemicarbazone : A pulse radiolysis study, **Anup N. Kate**, Anupa A. Kumbhar, Avinash V. Sapre, Swarada R. Peerannawar, and Shridhar P. Gejji, *Journal of Physical Chemistry A*, **2013**,**117**, **5447-5453**.

Conference/Workshop attended

- Workshop on ‘Advanced Organometallic Chemistry’ at Department of Chemistry Savitribai Phule Pune University, August 16-21, 2016.

- Presented Poster on “Copper(II) and Cobalt(III) Complexes of Anthracene 4N-methyl thiosemicarbazone: Synthesis, characterization and interaction with DNA” at 17th CRSI National symposium in Chemistry, at CSIR-NCL, Pune, February 6-8, 2015
- Presented Poster on “Monitoring Cellular Uptake and Cytotoxicity of Copper (II) Complex Using a Fluorescent Anthracene Thiosemicarbazone Ligand” at 16th CRSI National symposium in Chemistry, at IIT Bombay, February 7-9, 2014
- Presented Poster on “Interaction of hydrated electron with anthraldehyde thiosemicarbazone” at National symposium on Radiation and Photochemistry, NSRP- 2013 at NEHU, Shillong, March 20-22, 2013
- Workshop on “Radiation and photochemistry” at National Centre for Free Radical Research (NCFRR), University of Pune, February 1-2, 2012
- Workshop on “Metals in Health and diseases” at Agharkar Research Institute Pune, January 8, 2013
- Workshop on “EPR spectroscopy” at Sophisticated Analytical Instrumentation Facility (SAIF) at IIT Bombay, Powai, Mumbai, February 4-6, 2013.