

Name : Dr. S. Sathiyaraj

Designation : Assistant Professor

Department : Chemistry

Qualification: M.Sc., M.Phil., Ph.D.

Experience : Teaching: 7 Years 1 Month Industry: 1 Year Research: 10 Years

Area of Specialization(s): Coordination and Bioinorganic Chemistry

Email (Official ID): sathiyaraj@drngpasc.ac.in



Academic Qualifications

Degree	Branch	Institution / University Name	Year of Graduation
Ph.D.	Chemistry	Sri Ramakrishna Mission Vidyalaya College of Arts and Science, Coimbatore.	2014
M.Phil.	Chemistry	Sri Ramakrishna Mission Vidyalaya College of Arts and Science, Coimbatore.	2009
M.Sc.	Chemistry	CBM College of Arts and Science, Coimbatore.	2007
B.Sc.	Chemistry	Government Arts College, Coimbatore.	2005

Additional Qualifications

Diploma / Vocational / Certification	Area of Specialization	Institution / University / Agency Name	Year
Online Certificate	Enhancing Soft Skills and Personality	NPTEL	2019
Online Certificate	Refresher course in Chemistry for higher education	ANNUAL REFRESHER PROGRAMME IN TEACHING (ARPIT) - 2020	2020

Research Publications (Indexed)

International:

1. M.K. Satheeshkumar, E. Ranjith Kumar, P. Indhumathi, M. Deepty, Ch. Srinivas, S. Sathiyaraj, N. Suriyanarayanan, D.L. Sastry, **Structural, morphological and magnetic properties of algae/CoFe and algae/Ag-Fe-O nanocomposites and their biomedical applications**, Inorganic Chemistry Communications, Vol - 111 PP. 1- 6, 2020, ISSN:1387-7003, (Indexed in SCOPUS).
2. K. Sampath, S. Sathiyaraj, P. Indhumathi, M. Shanmugaprakash, **Research on biological properties of Ruthenium (III) heterocyclic schiff base complexes**, International Journal of Innovative Technology and Exploring Engineering (IJITEE), Vol-8, Issue-12S, pp. 332-334, October 2019, ISSN: 2278-3075, (Indexed in SCOPUS).
3. G. Magesh, G. Bhoopathi, A.P. Arun, E. Ranjith Kumar, Ch. Srinivas, S. Sathiyaraj, **Study of structural, morphological, optical and biomedical properties of pH based ZnO nanostructures, supperlattices and microstructures**, Vol. 124, pp. 41–51, December 2018, ISSN: 0749-6036, (Indexed in SCOPUS).
4. P. Indhumathi, S. Sathiyaraj, Jeremy P. Koelmel, U.S. Shoba, C. Jayabalakrishnan, M. Saravanabhavan, **The efficient removal of heavy metal ions from industry effluents using waste biomass as low-cost adsorbent: thermodynamic and kinetic models**, Zeitschrift für Physikalische Chemie - De Gruyter, Vol. 232, Issue, 4, pp. 527-543, November 2017, ISSN: 2196-7156, (Indexed in SCOPUS).
5. P. Indhumathi, S. Sathiyaraj, U.S. Shoba, P.S. Syed Shabudeen, C. Jayabalakrishnan, **Thermodynamic and kinetic models for removal of thorium from aqueous solution**, Journal of Advanced Physics, Vol. 06, pp. 148-156, March 2017, ISSN: 2168-2003, (Indexed in Web of Science)
6. E. Ranjith Kumar, P. Siva Prasada Reddy, G. Sarala Devi, S. Sathiyaraj, **Structural, dielectric and gas sensing behavior of mn substituted spinel MFe_2O_4 ($m = Zn, Cu, Ni, \text{ and } Co$) ferrite nanoparticles**, Journal of Magnetism and Magnetic Materials, Vol.398 12, pp. 281-288, January 2016, ISSN: 0304-8853, (Indexed in SCOPUS).
7. S. Sathiyaraj, G. Ayyannan, C. Jayabalakrishnan, **Synthesis, spectral, dna binding and cleavage properties of Ruthenium(II) schiff base complexes containing $PPH_3/ASPH_3$ as Co-ligand**, Journal of the Serbian Chemical Society, Vol. 79, Issue. 12, pp. 151-164, June 2014, ISSN: 0352-7421, (Indexed in SCOPUS).
8. S. Sathiyaraj, K. Sampath, C. Jayabalakrishnan, **Synthesis, spectral characterization, DNA binding, DNA cleavage and antioxidant studies of Ruthenium(III) heterocyclic thiosemicarbazone complexes**, Synthesis and Reactivity in Inorganic, Metal-Organic, and Nano-Metal Chemistry, Vol. 44, Issue. 09, pp. 1261-1271, January 2014, ISSN: 2470-1564, (Indexed in SCOPUS).
9. S. Sathiyaraj, K. Sampath, R.J. Butcher, R. Pallepogu, C. Jayabalakrishnan, **DNA binding/cleavage, antioxidant and cytotoxic activities of water soluble Cobalt(II) and Copper(II) antipyrine**

complexes, Inorganica Chimica Acta, Vol. 406, pp. 44-52, July 2013, ISSN: 0020-1693, (Indexed in SCOPUS).

10. S. Sathiyaraj, K. Sampath, R.J. Butcher, R. Pallepogu, C. Jayabalakrishnan, **Designing, structural elucidation, comparison of DNA binding, cleavage, radical scavenging activity and anticancer activity of Copper(I) complex with 5-dimethyl-2-phenyl-4-[(pyridin-2-ylmethylene)-amino]-1,2-dihydro-pyrazol-3-one schiff base ligand**, European Journal of Medicinal Chemistry, Vol. 64, pp. 81-89, June 2013, ISSN: 0223-5234, (Indexed in SCOPUS).

11. S. Sathiyaraj, C. Jayabalakrishnan, **Synthesis, characterization, DNA binding and cleavage activity of Ruthenium(II) complexes with heterocyclic substituted thiosemicarbazones**, Journal of Chilean Chemical Society, Vol. 58, pp. 1637-1642, June 2013, ISSN: 0717-9707, (Indexed in SCOPUS).

12. S. Sathiyaraj, K. Sampath, R.J. Butcher, C. Jayabalakrishnan, **Synthesis, DNA binding, antioxidant and cytotoxic activities of Ruthenium(II) complexes of a schiff base ligand**, Transition Metal Chemistry, Vol. 38, pp. 291-298, January 2013, ISSN: 0340-4285, (Indexed in SCOPUS).

13. S. Sathiyaraj, R.J. Butcher, C. Jayabalakrishnan, **DNA interaction and cytotoxicity studies of Ruthenium(III) complexes containing 3-(benzothiazol-2-yliminomethyl)-naphthalen-2-ol ligand**, Journal of Coordination Chemistry, Vol. 66, pp. 580-591, January 2013, ISSN: 1029-0389, (Indexed in SCOPUS).

14. K. Sampath, S. Sathiyaraj, C. Jayabalakrishnan, **DNA binding, DNA cleavage, antioxidant and cytotoxicity studies on Ruthenium(II) complexes of benzaldehyde 4-methyl-3-thiosemicarbazones**, Spectrochimica Acta Part A: molecular and Biomolecular Spectroscopy, Vol. 105, pp. 582-592, January 2013, ISSN: 1386-1425, (Indexed in SCOPUS).

15. K. Sampath, S. Sathiyaraj, C. Jayabalakrishnan, **Synthesis, spectroscopic studies of binuclear Ruthenium(II) carbonyl thiosemicarbazone complexes containing PPh₃/AsPh₃ as Co-ligands: DNA binding/cleavage**, Bulliten of Korean Chemical Society, Vol. 34, pp. 367-373, March 2013, ISSN: 1229-5949, (Indexed in SCOPUS).

16. K. Sampath, S. Sathiyaraj, C. Jayabalakrishnan, **Ruthenium(II) complexes of benzothiazolylthiosemicarbazones: synthesis, characterization, DNA-binding, DNA cleavage and cytotoxicity**, Synthesis and Reactivity in Inorganic, Metal-Organic, and Nano-Metal Chemistry, Vol. 43, pp. 1279-1288, September 2013, ISSN: 2470-1564, (Indexed in SCOPUS).

17. K. Sampath, S. Sathiyaraj, C. Jayabalakrishnan, **Evaluation of DNA-binding, DNA cleavage, antioxidant and cytotoxic activity of mononuclear Ruthenium(II) carbonyl complexes of benzaldehyde 4-phenyl-3-thiosemicarbazones**, Spectrochimica Acta Part A: Molecular and Biomolecular Spectroscopy, Vol. 115, pp. 287-296, June 2013, ISSN: 1386-1425, (Indexed in

SCOPUS).

18. K. Sampath, S. Sathiyaraj, C. Jayabalakrishnan, **DNA interaction, antioxidant and in vitro antitumor activity of binuclear Ruthenium(III) complexes of benzothiazole substituted ferrocenyl thiosemicarbazones**, Medicinal Chemistry Research, Vol. 23, pp. 958-968, August 2013, ISSN: 1054-2523, (Indexed in SCOPUS).

19. K. Sampath, S. Sathiyaraj, G. Raja, C. Jayabalakrishnan, **Mixed ligand Ruthenium(III) complexes of benzaldehyde 4-methyl-3-thiosemicarbazones with triphenylphosphine/triphenylarsine Co-ligands: synthesis, DNA binding, DNA cleavage, antioxidative and cytotoxic activity**, Journal of Molecular Structure, Vol. 1046, pp. 82-91, April 2013, ISSN: 0022-2860, (Indexed in SCOPUS).

20. S. Sathiyaraj, R.J. Butcher, C. Jayabalakrishnan, **Synthesis, characterization, DNA interaction and in vitro cytotoxicity activities of Ruthenium(II) schiff base complexes**, Journal of Molecular Structure, Vol. 1030, pp. 95-103, July 2012, ISSN: 0022-2860, (Indexed in SCOPUS).

Presentations in Conference

1. Benzothiazole-2-ylamine schiff base complexes of Ruthenium(III): synthesis, spectral characterization, redox, catalytic and biological studies, National Conference on Current Trends in Chemistry, Department of Chemistry, Bharathiar University, Coimbatore-46, 02-Dec-2010 to 03-Dec-2010.

2. Studies on synthesis, characterization, DNA binding, DNA cleavage and *in vitro* anticancer activity of Ruthenium(III) schiff base complexes, International Conference on Chemistry In Synergy with Materials and Biology, Department of Chemistry, Bishop Heber college, Tiruchirappalli-17, 10-Jan-2014 to 11-Jan-2014.

3. Synthesis, characterization, DNA binding, DNA cleavage and *in vitro* anticancer activity of Ruthenium(III) Schiff base complexes, National Conference on Advanced functional materials and their applications in engineering, Science & Humanities Department, Dr. N.G.P. Institute of Technology, Coimbatore, 25-Jan-2017.

4. DNA binding/cleavage, antioxidant and cytotoxic activities of Ruthenium(III) complexes, ICMR sponsored National Conference on Chemistry of Advance Materials and its Biomedical Applications, Department of Chemistry, Kumaraguru College of Technology, Coimbatore – 49, 20-Apr-2018 to 21-Apr-2018.

5. Designing, structural elucidation, comparison of DNA/BSA interaction of pharmacological eluation of transition metal, National Conference on Recent Trends in Chemistry, Department of Chemistry, Sri Ramakrishna Mission Vidyalaya College of Arts and Science, Coimbatore-20, 02-Feb-2018.

6. Sustainable synthesis of cobalt nanoparticles using cymbopogon citratus and evaluation of their anticancer activity, National Conference on Recent Trends in Chemistry, Department of

Chemistry, Sri Ramakrishna Mission Vidyalaya College of Arts and Science, Coimbatore-20, 07-Feb-2020.

7. Green synthesis of silver nanoparticles using cymbopogon citrates and their anticancer activity, National Conference on Recent Trends in Basic and Applied Sciences, Faculty of Basic and Applied Sciences, Dr. N.G.P. Arts and Science College, Coimbatore-48, 03-Mar-2020 to 04-Mar-2020.

Participation in Conference

International:

1. International conference on Renewable Energy and Environment, Department of Physics, Sri Ramakrishna Mission Vidyalaya College of Arts and Science, Coimbatore-20, 15-Dec 2016 to 15-Dec-2016.

National:

1. Conference on “Recent Trends in Green Chemistry”, Department of Chemistry, Sri Ramakrishna Mission Vidyalaya College of Arts and Science, Coimbatore-20, 11-Jul-2013 to 12-Jul-2013.

2. Conference on “Recent Trends in Green Chemistry”, Department of Chemistry, Sri Ramakrishna Mission Vidyalaya College of Arts and Science, Coimbatore-20, 22-Jul-2009 to 23-Jul-2009.

Participation in Workshop

1. The Third International workshop on Teaching and Learning in the Twenty First Century, B.S. Abdur Rahman University, Chennai, 17-Dec-2013.

2. TEQIP - II sponsored Two Day Workshop on Polymeric Materials - Characterization and Application, Department of Chemistry, Coimbatore Institute of Technology, Coimbatore-14, 29-Nov-2013 to 30-Nov-2013.

3. Spectroscopy and its Applications, Department of Chemistry, Sri Ramakrishna Mission Vidyalaya College of Arts and Science, Coimbatore-20, 18-Feb-2013.

4. Spectroscopy, Department of Chemistry, Bharathiar University, Coimbatore-46, 7-Mar- 2012.

5. Innovations and Applications of Chemistry, Department of Chemistry, Sri Ramakrishna Mission Vidyalaya College of Arts and Science, Coimbatore-20, 21-Sep-2011.

6. 1D and 2D NMR Spectroscopy and their Applications, Department of Chemistry, Sri Ramakrishna Mission Vidyalaya College of Arts and Science, Coimbatore-20, 13-Sep-2010.

Participation in Seminars

1. National level seminar on “Advanced Materials”, Department of Physics, Karpagam college of Engineering, Coimbatore, 08-Dec-2017.
2. International Seminar on Novel Approaches in Chemistry & its Environmental Impacts, KPR Institute of Engineering & Technology, Coimbatore, 26-Sep-2015.
3. 19th ISTE TN & P Section Annual Convention for Faculty Members of Engineering Colleges”, Dr. N.G.P. Institute of Technology, Coimbatore, 02-Dec-2016 to & 03-Dec-2016.

Participation in Faculty Development Programme

1. Quality Initiatives in Higher Education, Dr. N.G.P. Arts and Science College, Coimbatore, 03-Dec-18 to 09-Dec-18.
2. Shifting Paradigm: Improving Mentor competencies to match present-day academic priorities, Science & Humanities Department, Dr. N.G.P. Institute of Technology, Coimbatore, 28-Dec-2016.
3. Intelligence Emotion, ICTACT- Tamil Nadu and J C T college of Engineering & Technology, Coimbatore. 29-Sep-2016 to 30-Sep-2016.
4. Lattice Minerva, Hope Factory and Dr. N.G.P Institute of Technology, Coimbatore – 48, 18-Jul-2013 to 20-Jul-2013.

Conference / Seminar / Workshop Organized

Organizing Secretary, National Conference on Recent Trends in Basic and Applied Sciences, Faculty of Basic and Applied Sciences, Dr. N.G.P. Arts and Science College, Coimbatore-48, 03-Mar-2020 to 04-Mar-2020.

Invited Speaker / Session Chair / Member Organizing Committee - Conference / Seminar / Workshop

1. Session Chair, Endowment Lecture Svante Arrhenius, Dr. N.G.P. Arts and Science College, Coimbatore, 03-Mar-2020.

2. Invited Speaker, Guest Lecture on Alkynes, Vivekananda College of Arts and Science, Tiruchengode, 17-Feb-2020.
3. Key Note Address, INTERCOLLEGIATE MEET, CHEMBOND – 14, Kongunadu Arts and Science College, Coimbatore, 24-Sep-2015.

Member in BoS

Chairman, Board of Chemistry, Dr. N.G.P. Arts and Science College, Coimbatore, since 2018

Membership in Professional Bodies

Name of the Professional Body	Nature of membership	Duration
ISTE - LM 99306	LIFE TIME MEMBER	-

Awards / Honors

Awards / Honors	Agency / Institute	Year of Award
NCC AIRWING (‘B’ Certificate)	National Cadet Corps	2005
Best HoD	Dr. N.G.P. Arts and Science College, Coimbatore	2020