

Name : **Dr. A. VIJAYAKUMAR**
Designation : Assistant Professor of chemistry
Address : Virudhunagar Hindu Nadars' SenthikumaraNadar College
(Autonomous), Virudhunagar, Tamilnadu, India.
Phone : 04562-280154
Fax : 04562-281338
E-Mail : vijayakumar.a@vhnsnc.edu.in
Mobile : 9843198198
Education : M.Sc., M.Phil., Ph.D.,



Title of Dissertation

M.Phil: Kinetics and mechanism of the base catalyzed addition of thiophenol to β -nitrostyrene

Ph.D: Kinetics and equilibrium studies on the removal of dyes by adsorption onto activated carbons prepared from tree leaves.

Areas of Specialization: General Chemistry

Course Attended

No.	Title	Place	Period
1.	90 th Orientation Programme	UGC-Human Resource Development Centre, Bharathidasan University, Tiruchirappalli – 620 023.	13-11-2015 to 10-12-2015
2	Refresher course in Material Science	UGC-Human Resource Development Centre, University of Hyderabad, Hyderabad – 500 046.	04-08-2017 to 24-08-2017
3	Refresher course in chemistry	UGC-Human Resource Development Centre, Madurai Kamaraj University, Madurai	7-11-2022 to 20-11-2022

Seminars, Workshops and Conference Attended

State level Seminars - 1

National level Seminars – 22

International level Seminars/ Workshops/ Conference - 3

Paper Presented

Paper presented in National & international level Seminars / Conference - 40

Books Published: Edited 3 ISBN Books

Research Publications:

Research Publications in National/International Journals – 8

Research Publications in Edited Books – 11

Research Experience

Degree	Awarded	Submitted	Guiding
M.Phil	9	----	1

Invited Lectures delivered:

1. Delivered a guest lecture on “Solid state” on 21.10.2011 at P.G. Department of Chemistry, Aditanar College of Arts and Science, Tiruchendur.

Resource Person:

1. Served as a Resource Person in the “Two days In service Education extended to P.G chemistry Teachers of Higher Secondary Schools” Organised by Dr.Sivanthi Aditanar College of Education. Tiruchendur on 09.01.2006 and 10.01.2006.
2. Served as a Resource Person in the TNSCST sponsored YSSP – 2012 programme conducted by V.H.N.S.N. College, Virudhunagar from 02.05.2012 to 21.05.2012.

Extension Activities:

Served as a warden in V.H.N.S.N. College Boys hostel from 1.06.2013 – 31.05.2017

Publication in research Journals:

1. Preparation and characterization of Cu-ZrO₂nanocomposite by DC method ;K.Arunsunakumar, A.Sakthivel, **A.Vijayakumar**, A.Sarathi and S.Senthilkumar, Journal of Advanced Applied Scientific Research **1-9** (2017) 54-61.
2. Adsorption of basic dyes onto activated carbon prepared from teak leaf ; N.Kannan, **A.Vijayakumar** and P.Subramaniam, Indian Journal of Environmental Protection, **31** (2011) 761-767
3. Detoxification studies on the removal of malachite green using teak leaf material; N.Kannan, **A.Vijayakumar** and P.Subramaniam, Indian Journal of Environmental Protection, **30** (2010) 761-767.
4. Studies on the removal of red industrial dye using teak leaf, maize corn and babool carbons – A comparison; N.Kannan, **A.Vijayakumar** and P.Subramaniam, E-Journal of chemistry, **7(3)** (2010) 770-774.
5. Comparative study on the removal of red industrial dye using groundnut shell and coconut shell carbon; N.Kannan and **A.Vijayakumar**, Indian Journal of Environmental Protection, **28** (2008) 1034-1040.
6. Base catalysed addition of thiophenol to β -nitrostyrene in aqueous acetonitrile – A kinetic study; P.A. Sarathi, **A. Vijayakumar**, C.Gananasekaran and A. Shunmugasundaram, Journal of Indian chemical Society; **81** (2004) 1157.
7. Preparation and characterization of Cu-ZrO₂nanocomposite by DC method ;K.Arunsunakumar, A.Sakthivel, **A.Vijayakumar**, A.Sarathi and S.Senthilkumar, Journal of Advanced Applied Scientific Research **1-9** (2017) 54-61.
8. Statistical optimization of poly- β -hydroxybutyrate biosynthesis using the spent mushroom substrate by *Bacillus tequilensis* PSR-2: K. Susithra. K.Badri narayanan, U.Rajesh, G.Prem kumar, G.Varatharaju, **A.Vijayakumar** and M.Kannan, Waste and biomass Valorization, <https://doi.org.10.1007/s12649-021-01460-8>.

List of ISBN numbered books edited

S.No.	Name of the book	Editors
1	Recent Developments in the Applications of Transition Metal Complexes in Bioinorganic and Medicinal Chemistry, ISBN 978-93-81723-70-8.	Dr.N.Raman, Dr.A.Sarathi, Dr.A.Sakthivel, Dr.A.Vijayakumar and Dr.K.Arumsunai Kumar
2	Frontier Areas in Chemical Sciences ISBN 978-93-81723-69-2.	Dr.N.Raman, Dr.A.Sarathi, Dr.A.Sakthivel, Dr.A.Vijayakumar and Dr.K.Arumsunai Kumar
3	Treatise on Recent Advances in Bioinorganic and Medicinal Chemistry, ISBN 978-93-81723-63-0.	Dr.N.Raman, Dr.A.Sarathi, Dr.A.Sakthivel, Dr.A.Vijayakumar and Dr.K.Arumsunai Kumar

List of research papers published in ISBN numbered books

1. Synthesis and structural investigations of zinc oxide nanoparticles and amino acid modified zinc oxide nanoparticles, **A.Vijayakumar**, A,Sathivel, N.Raman, A.Sarathi and K.Arumsunaikumar, Recent Developments in the Applications of Transition Metal Complexes in Bioinorganic and Medicinal Chemistry, ISBN 978-93-81723-70-8, page10-15.
2. Electrochemical studies of electrodeposited Cu – CeO₂ composite coatings, K. Arunsunai Kumar, A,Sathivel, **A.Vijayakumar**, A.Sarathi and S.Senthilkumar, Recent Developments in the Applications of Transition Metal Complexes in Bioinorganic and Medicinal Chemistry, ISBN 978-93-81723-70-8, page 152-158.
3. Synthesis, structural elucidation and DNA binding study of 4-aminoantipyrine incorporating mixed ligand zinc complexes having amino acid as co-ligand, A,Sathivel, **A.Vijayakumar**, N.Raman, A.Sarathi and K.Arumsunaikumar, Recent Developments in the Applications of Transition Metal Complexes in Bioinorganic and Medicinal Chemistry, ISBN 978-93-81723-70-8, page26-33.
4. Synthesis, structural elucidation and DNA binding study of 4-aminoantipyrine incorporating mixed ligand copper complexes having amino acid as co-ligand, A,Sathivel, **A.Vijayakumar**, N.Raman, A.Sarathi and K.Arumsunaikumar, Frontier Areas in Chemical Sciences ISBN 978-93-81723-69-2, page 180-188.

5. Synthesis and structural investigations of valine modified zinc oxide nanoparticles, **A.Vijayakumar**, A.Sathivel, N.Raman, A.Sarathi and K.Arunsunai Kumar, Frontier Areas in Chemical Sciences ISBN 978-93-81723-69-2, page 163-169.
6. Electrochemical and mechanical studies of electrodeposited Cu – SiO₂ composite coatings, K. Arunsunai Kumar, A.Sathivel, **A.Vijayakumar**, A.Sarathi and S.Senthilkumar, Frontier Areas in Chemical Sciences ISBN 978-93-81723-69-2, page 204-213.
7. DNA – Interaction study and antimicrobial activity of Schiff base transition metal complexes incorporating heterocyclic ligand, A.Sathivel, **A.Vijayakumar**, N.Raman, A.Sarathi and K.Arunsunai Kumar, A Treatise on Recent Advances in Bioinorganic and Medicinal Chemistry, ISBN 978-93-81723-63-0, page 21-30.
8. Enhanced Corrosion resistance of Cu-TiO₂ composite by DC method, K. Arunsunai Kumar, B.Tharmalingam, A.Sathivel, **A.Vijayakumar**, A.Sarathi and S.Senthilkumar, A Treatise on Recent Advances in Bioinorganic and Medicinal Chemistry, ISBN 978-93-81723-63-0, page 119-125.
9. Synthesis, structural elucidation and inhibitory study of benzil transition metal complexes, A.Sathivel, **A.Vijayakumar**, N.Raman, A.Sarathi and K.Arunsunai Kumar, A Treatise on Recent Advances in Bioinorganic and Medicinal Chemistry, ISBN 978-93-81723-63-0, page 146- 149.
10. Synthesis, structural elucidation and inhibitory study of carbazole transition metal complexes, A.Sakthivel, N.Raman, A.Sarathi and **A.Vijayakumar**, A Treatise on Emerging Trends in Bioinorganic Chemistry ISBN 978-93-81723-31-9, page 147-158.
11. Synthesis, structural elucidation and a comparative study of antimicrobial activity of Schiff base and their mixed ligand complexes, A.Sakthivel, **A.Vijayakumar** and N.Raman, A Treatise on Conference on Modern Trends in Chemical Sciences ISBN 978-93-81723-25-8, page 147-158.

List of publication in conference proceedings:

1. Green synthesis of copper oxide nano particles *PterocarpusMarsupium* resin (vengai), V.Pavithra, R.Anitha, **A.Vijayakumar**, Sujin P. Josec and S.Prakash Proceedings of International Conference on Advances in Biological Chemical & Physical Sciences (ABCPS), (2017) 144, Anna University-BIT CampousTiruchirappalli.
2. Green synthesis of copper oxide nano particles from AzadirachtaIndica plant gum and their characterization R.Anitha, V.Pavithra, **A.Vijayakumar**, Sujin P. Josec and S.Prakash Proceedings of International Conference on Advances in Biological Chemical & Physical Sciences (ABCPS), (2017) 144, Anna University-BIT CampousTiruchirappalli.
3. Synthesis and spectral characterization of 4-aminoantipyrine based Schiff base metal complexes and their biological studies, A.Sakthivel, N.Raman and **A.Vijayakumar**, Proceedings of national seminar on Emerging Trends in Chemistry (ETC – 05, 2014), 36, Cardamom Planters Association College, Bodinayakanur.
4. A novel approach to the synthesis of pyrazoline derivatives, spectral characterization and antimicrobial studies A.Sarathi, R.Manipriya and **A.Vijayakumar**, Proceedings of national seminar on Emerging Trends in Chemistry (ETC – 05, 2014), 37, Cardamom Planters Association College, Bodinayakanur.
5. Fixed bed coloumn studies on the detoxification of rhodamine –B by adsorbent material prepared from *MadhucaLongifolia* tree leaf, **A.Vijayakumar**, A.Sathivael, A.Sarathi and N.Raman Proceedings of national seminar on Emerging Trends in Chemistry (ETC – 05, 2014), 38, Cardamom Planters Association College, Bodinayakanur.
6. Adsorption of Rhodamine-B onto activated carbon prepared from CasuarinasEquisetifolialinn leaf material, N. Kannan, **A. Vijayakumar** and P. Subramaniam, Sixth All India Conference of KAAS, S.T. Hindu College, Nagercoil, pp.9, September 10 & 11, **2010**.
7. Adsorption of Rhodamine-B onto activated carbon prepared from *CasuarinasEquisetifolialinn* leaf material; N.Kannan, **A.Vijayakumar** and P.Subramaniam, Proceedings of the Fifth All India Level Conference of KASS, Volume – III Sciences (2009) 38-42 Holy Cross College , Nagercoil .