



Name : Dr. E. SUBRAMANIAN
Designation : PROFESSOR & HEAD
Department : Department of Chemistry
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Dr. E. Subramanian, Professor of Chemistry since July 2006, is credited with 58 publications in reputed journals like *Chem. Commun. (RSC)*, *J. Polym. Sci.*, *Polym. Chem. (Wiley)* etc., and with post-doc in Korea Research Institute of Chemical Technology, South Korea under Govt. Brain Pool Program for 1.5 years. Actively engaged in research in hot fields (Polymers, Sensors, Solar Energy Conversion), he has secured 4 awards, completed 3 projects, guided 5 Ph.D scholars and participated & presented papers in many International & National conferences/seminars.

Contact details

Dr. E. Subramanian, Professor & Head, Department of Chemistry,
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Educational Qualifications (Chronologically reverse)

- PDF: 1989-1990 University of Madras (Dept. of Energy)
- Ph. D 1984-1988, University of Madras (Dept. of Physical Chemistry)
- UGC NET JRF 1984
- M.Sc (Chemistry), 1983, 75% marks, I Class, Madurai Kamaraj University
- B.Sc (Chemistry), 1981, 82% marks, I Class, Madurai Kamaraj University

Academic Affiliation

- Professor, Manonmaniam Sundaranar University, July 2006 – Till date
- Brain Pool Scientist, KRICT, Korea, December 2006 – May 2008
- Reader, Manonmaniam Sundaranar University, 1998 – 2006
- Lecturer (Senior Scale), Manonmaniam Sundaranar University, 1995 – 1998
- Lecturer, Manonmaniam Sundaranar University, 1995 – 1990

Professional Affiliation

- ❖ Member, Board of Studies, Dept of Chemistry, Manonmaniam Sundaranar University
- ❖ Member, Board of Studies in Chemistry, Sarah Tucker College, Tirunelveli – 11
- ❖ Member, Mano College Committee, Manonmaniam Sundaranar University
- ❖ Associate Editor - College Sadhana, A Bi-annual Multidisciplinary Publication (ISSN 0974-6838) from V.H.N.S.N. College, Virudhunagar
- ❖ Life Fellow, Indian Council of Chemists F 674
- ❖ Life Fellow, Materials Research Society of India (MRSI), LM B280

Training and Consultancy

- Water Treatment Technology & Water Pollution Control
- Solar Energy Conversion through Photocatalysis
- Conducting Polymer based Sensors

Area of Research

- Synthesis, Characterization and Application of conducting polymer materials
- Design and function of chemical sensor devices
- Photocatalysis & solar energy conversion
- Assessment and removal of water pollutants
- Polymer-ligand complexes in relation to the biological role of proteins

Research Guidance : Ph.D (guided 4 + under guidance 4); M.Phil - 15

Research Projects : 2 Major & 3 Minor Projects completed; DST – SERC Project on-going

Reviewer For many international and National journals

RESEARCH PROJECTS

NAME OF FACULTY	TITLE OF THE PROJECT	FUNDING AGENCY	TOTAL AMOUNT SANCTIONED
Dr. E. Subramanian	1. Development of Analyte-specific Multicomponent Chemical Sensors Based on Conducting Polyaniline Composites Completed 2010-2014 2. “Fabrication of Titania Nanotube arrays with Polyoxometallates and their photoelectrochemical properties” (PI : Dr. D. Pathinettam Padiyan) (Co-PI : Dr. E. Subramanian)	DST SERC	Rs. 13,41,200
		DST SERC NANOMISSION	Rs. 31,35,960
		DAE BRNS	Rs. 11.18 lakh

	COMPLETED 2011- 2014 3. “Influence of electron beam irradiation on the properties of conducting polymer composites” (PI : Dr. D. Pathinettam Padiyan) (Co-PI : Dr. E. Subramanian) COMPLETED (2007-2010)		
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DETAILS OF COLLABORATIVE PROGRAMME (TEACHING, RESEARCH AND EXTENSION ACTIVITIES).

Intra and inter department:

Chemistry and Physics Departments collaborate in research and have two collaborative research projects sanctioned by DST, Govt. of India.

S. No.	Title of the Scheme/Project	Name of the Investigator	Sponsored by	Total Amount Sanctioned
1	Development of Analyte-specific Multicomponent Chemical Sensors Based on Conducting Polyaniline Composites	E.Subramanian (PI) Dr. Pathinettam Padiyan (Co-PI) Professor of Physics	DST SERB Govt. of India completed by 31-12-2013	Rs. 13,41,200/-
2	Fabrication of Titania Nanotube arrays with polyoxo metallates and their photoelectrochemical properties	Dr. Pathinettam Padiyan (PI) Professor of Physics E.Subramanian (Co-PI) Professor of Chemistry	DST SERB 2011-2014	Rs.31,35,960/-

Non-government organisations:

With M/s SPIC Ltd. “Encapsulation of Arsenic sludge” COMPLETED
Rs. 2 Lakh, PI : Dr . M. Sivasankaran Nair, Co-PI: Dr. E. Subramanian

iv. International organisations:

Dr. E. Subramanian

Linkage developed for collaborative research work on Solar Energy Conversion and H₂ production, Chemistry department - Warsaw University, Poland

SEMINARS/WORKSHOPS As Member / Convener

1. National Conference on Current Trends in Chemistry, 24-25 March 2011
2. National Workshop on Green Chemistry, 17-22, August 2011
3. National Symposium on Newer Horizons in Chemistry, 09 March 2012
4. CDC workshop for PG Chemistry course Organized by Department of Chemistry, Manonmaniam Sundaranar University, during March 21-22, 2013
5. CDC workshop for UG Chemistry course Organized by Department of Chemistry,

Manonmaniam Sundaranar University, during February 22 – 24, 2014
 6. National conference on “Chemistry for Sustainable Energy Clean Environment and Health (CEEH)” 21&22 January 2015

Publications in last 5 years

1.	E Subramanian and R Dhana Ramalakshmi Pristine, purified and polyaniline-coated tamarind seed (<i>Tamarindus indica</i>) biomaterial powders for defluoridation: Synergism and enhancement in fluoride-adsorption by polyaniline coating <i>J. Sci. Ind. Res.</i> 69, 621-628 (2010)
2.	N. Vijayakumar, E. Subramanian and D. Pathinettam Padiyan. “Nanostructured polyaniline blends from sodium dodecylbenzenesulfonate and/or poly(vinyl pyrrolidone) soft-templated interfacial polymerization: Material characteristics and AC Impedance analysis”. <i>International Journal of Nanotechnology and Applications</i> , 5, 233, (2011).
3.	N. Vijayakumar, E. Subramanian and D. Pathinettam Padiyan. “Conducting polyaniline blends with the soft template poly(vinyl pyrrolidone) and their chemosensor application”. <i>International Journal of Polymeric Materials</i> , 61, 1–17, 2012
4.	N. Vijayakumar, E. Subramanian and D. Pathinettam Padiyan. “Single/double soft-template-involved synthesis of polyaniline nanoblends: Interfacial polymerization and characterization by AC impedance analysis”. <i>Journal of Macromolecular Science, Part B: Physics</i> , 51:1617–1636, 2012.
5.	E. Subramanian , R. Dhana Ramalakshmi, N. Vijayakumar and G. Sivakumar <i>Hybrid composite materials of anatase titania and conducting polyaniline: properties and chemical sensor application</i> <i>Indian Journal of Engineering and Materials Sciences</i> , 19, 237-244, 2012.
6.	E. Subramanian , R. Dhana Ramalakshmi, N. Vijayakumar <i>Controlled Alteration of Conducting Polyaniline Chemo-sensor Functionality through Blending with Poly(vinyl pyrrolidone)</i> Proceedings of the National Conference on Popularisation of Chemical Sciences (ISBN : 978-93-81195-12-3) Published by United Publishers, Nandigudda (P.O.), Mangalore for Department of Chemistry, Guru Nanak College, Chennai for the Conference held on 6 – 8 January, 2012.
7.	S.T. Nishanthi, D. Henry Raja, E. Subramanian , D. Pathinettam Padiyan, Remarkable role of annealing time on anatase phase titania nanotubes and its photoelectrochemical response <i>Electrochimica Acta</i> , 89, 239–245, (2013).
8.	E. Subramanian , S. Subbulakshmi, C. Murugan Inter-relationship between nanostructures of conducting polyaniline and the photocatalytic methylene blue dye degradation efficiencies of its hybrid composites with anatase TiO ₂ <i>Materials Research Bulletin</i> 51 (2014) 128–135
9.	S.T. Nishanthi, S. Iyyapushpam, B. Sundarakannan, E. Subramanian , D. Pathinettam Padiyan

	Inter-relationship between extent of anatase crystalline phase and photocatalytic activity of TiO ₂ nanotubes prepared by anodization and annealing method <i>Separation and Purification Technology</i> 131 (2014) 102–107
10.	M. Jansi Rani, M. Murugan, P. Subramaniam and E. Subramanian Adsorptive removal of arsenic from aqueous solution on PSLW carbon (<i>Prosopis spicigera</i> L.wood): Equilibrium, kinetics, thermodynamics and home water treatment studies <i>Research Journal of Chemistry and Environment</i> , 18 (2), 16-24 (2014).
11.	M. Murugan, M. Jansi Rani, P. Subramaniam and E. Subramanian Fluoride removal from aqueous solution using batch, column and home water treatment method by low cost adsorbent: <i>Prosopis spicigera</i> L.wood (PSLW) carbon <i>Indian Journal of Environmental Protection</i> 34 (3), 207-216 (2014).
12.	C. Murugan, E. Subramanian and D. Pathinettam Padiyan p–n Heterojunction formation in polyaniline–SnO ₂ organic–inorganic hybrid composite materials leading to enhancement in sensor functionality toward benzene and toluene vapors at room temperature <i>Synthetic Metals</i> , 192 , (2014) 106–112.
13.	C. Murugan, E. Subramanian , D. Pathinettam Padiyan <u>Enhanced sensor functionality of in situ synthesized polyaniline–SnO₂ hybrids toward benzene and toluene vapors</u> <i>Sensors and Actuators B: Chemical</i> , 205 , (2014), 74-81
14	C. Murugan, E. Subramanian Synthesis and Characterization of A Novel Ternary Photoactive Chitosan-Polypyrrole-TiO ₂ System for Visible Light Photocatalytic Application. <i>J. Adv. Chem. Sci.</i> 1 (3) (2015) 107–109.
15.	G. Sudha, E. Subramanian Synthesis, Characterization and Photocatalytic Study of Cerium Oxide/Zeolite-NaX Catalyst with Brilliant Green Dye Degradation. <i>J. Adv. Chem. Sci.</i> 1 (3) (2015) 117–120.
16.	G. Sudha, E. Subramanian, C. Murugan Development of iron oxide/zeo-nax nano photocatalyst from coal fly ash and its activity assessment by methylene blue dye degradation <i>Int. Res. J. of Natu. Appl. Sci.</i> 2, Issue-2 (2015)

Awards

1. Secured the Young Scientist Best paper award from ICC, 1993
2. INSA Visiting Fellowship for 2003-2004 to visit and work at IISc., Bangalore.
3. Secured the INSA award 2004-2005 to visit BRAZIL to work on SENSORS
4. Secured the INSA award 2013 to visit Poland to work on Solar Energy Conversion
5. Secured the Korean Govt. Brain Pool Fellowship and worked in Korea for 1 1/2 years. (2006-2008).