



1. Name : Prof Annamalai Senthil Kumar  
 2. Highest Qualification(s) : M.Sc., Ph.D., CChem, FRSC  
 3. Post-Doctoral Experience(s) :

i)	Taiwan - Post-doctoral Position - National Chung Hsing University, Taiwan; 1998 to 2005 (7 years)
ii)	Japanese Society for Promotion of Science, Post doctoral Position-Nara Women's University, Japan; 2005 to 2007 (2years)

4. Google Scholar : <https://scholar.google.com/citations?user=pUZgpfoAAAAJ&hl=en>  
 5. Group Webpage : <https://sites.google.com/site/drannamalaisenthilkumarvit/-current-group-members>  
 6. Research fields :

Nanoparticle for Bio-molecular Recognition,  
 Biosensor Chemically Modified Electrodes (CMEs),  
 Heterogenous (multi-component) membrane catalyst  
 Screen-printed electrodes (SPEs) based chemical &  
 Bio-chemical sensor Organic, bio, pharmaceutical and  
 metal redox mediator@carbon-nanotube based hybrid  
 electrodes

7. Collaboration :

National	i) Dr S.M.Senthil Kumar, Senior Scientist, Central Electrochemical Research Institute (CECRI), Karaikudi.
International	i) Prof. Jyh-Myng Zen, Department of Chemistry, National Chung Hsing University, Taichung 402, Taiwan ii) Prof Sheng-Tung Huang (黃聲東 博士), Distinguished Professor Department of Chemical Engineering and Biotechnology, Institute of Biochemical and Biomedical Engineering, National Taipei University of Technology (TAIPEI TECH), Taiwan iii) Prof Ki Tae Nam, Biomolecular Nanomaterials Laboratory, Department of Materials Science and Engineering, Seoul National University (SNU), Seoul 08826, South Korea iv) Prof Yun Suk Huh, Department of Biological Engineering, Inha University, Incheon 402-751, Republic of Korea.

8. Prize/Fellowships/Awards : Details

Awards	2022- Special Issue Editor (along with Prof V. Laxminarayan & Prof Carmel S. Breslin), Electrochemistry of Functionalized Carbon (EFCARBON-2022), Electrochimica Acta, Elsevier. 2021- Top 2% Scientists-list in the World (all fields). Recent survey conducted by Stanford University, USA 2021- Chartered Chemist (CChem). Royal Society of Chemistry (RSC), London 2021- Outstanding reviewer of Analyst (RSC). The Analyst, Royal Society of Chemistry, London 2018 - Distinguished Visiting Professor, National Taipei University of Technology, Taipei, Taiwan 2013 - Eminent Scientist, Indian Society of Electro Analytical Chemistry (ISEAC), India 2013 - Bharat Shiksha Ratan Award, Global Society for Health & Educational Growth, New Delhi 2012 - Editorial Board, Hindwai (ISRN Analytical Chemistry) 2009 - Visiting Professor, Prof.Jyh-Myng Zen's Lab, Taiwan 2008 - Technopreneur Innovator, Ministry of Science & Technology, India 2008 - Top-100 Scientist 2008, Nominated by International Biographical Centre, Cambridge, England 2007 - Young Scientist, Dept. of Sci. & Tech. (DST), India 2005 - Biography included in Who's Who in Asia Book Edition, USA 2005 - Young Scientist-Japanese society for the promotion of science (JSPS), Japan 2001 - ACS honourism for the Publication in Accounts of Chemical Research about "Enzyme Mimics and Electrocatalysis", 1998 - Nation Science Council of Taiwan, Postdoctoral Fellow, Taiwan 1995 - Council of Scientific and Industrial Research (CSIR)- Senior Research Fellow 1992 - Council of Scientific and Industrial Research (CSIR)- Junior Research Fellow 1992 - Graduate Aptitude Test in Engineering (GATE'92) from IIT-Madras
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9. Membership : List out the membership in professional bodies.

i)	Fellow Royal Society of Chemistry (FRSC) -Invited by Royal Society of Chemistry (RSC), London, 2016
ii)	Advisory Board member, <i>The Analyst</i> (RSC) Royal Society of Chemistry (RSC), London, 2014

10. Invited Talk : Total number. 67

11. Funded Projects/Consultancy :

Ongoing	1)Funding Agency: <b>DST - Science and Engineering Research Board</b> ; Title Of Project: In-Situ Electrochemical Oxidation Of $\pi$ Self-Assemble Polyaromatic Hydrocarbons to Redox Active Intermediates on Graphitic Materials Surfaces: - Mechanisms and Multipurpose Green Technology Applications Perspectives.; Amount (In Lakhs): 35.37; Duration: 2021-24 2.Funding Agency: <b>ICMR</b> ; Title of Project: Development of Rapid and High Sensitivity Electronicchemical Covid-19 Diagnosis Platform; Amount (In Lakhs): 49.49; Duration: 2023-24
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Completed	<p>1)Funding Agency: <b>DST - Science and Engineering Research Board</b>; Title of Project: Development of Stable and Redox-Active Inorganic/Organic Functionalized Carbon Nanotube Modified Electrodes: In-Sight Studies Using Scanning Electrochemical Microscopy and Electro-Catalytic/Bio-Electrocatalytic Applications; Amount (In Lakhs): 59.78; Duration: 2017-20</p> <p>2)Funding Agency: <b>DST-Technology System Development</b>; Title of Project: Development of Electrochemical Based Sensor for Detection of Lymphatic Filarial Parasite, Wuchereriabrancofti, In Vectors; Amount (In Lakhs): 33 (17.4); Duration: 2012-14</p> <p>3) Funding Agency: <b>DST-Technology System Development</b>; Title of Project: Flow Injection Analysis-Electro-Chemical Detector (FIA-ECD) For Biochemical Analysis; Amount (In Lakhs): 34.36; Duration: 2011-14</p> <p>4) Funding Agency: <b>DST-Scientific Engineering Research Council</b>; Title of Project: Revealing Mechanism on The Encapsulation/Immobilization of Organic Redox Mediators on Carbon Mediators on Carbon Nanotube Modified Electrode by Surface Enhanced Raman Spectroscopy and Electrochemical Techniques; Amount (In Lakhs): 32.28; Duration: 2011-14</p> <p>5) Funding Agency: <b>DST- Nano mission</b>; Title of Project: Nano-Molecular Structures Stabilized Thin-Film Electrodes: Preparation, Surface Correlation and Electrocatalysis; Amount (In Lakhs): 20.54; Duration: 2010-13</p> <p>6) Funding Agency: <b>Confederation of Indian Industry, New Delhi and NSC Taiwan (Overseas)</b>; Title of Project: Development of Active Nanomaterials on Disposable Electrodes; Amount (In Lakhs): 80 (Travel Grant); Duration: 2010-13</p> <p>7) Funding Agency: <b>Ministry of Science and Technology, Technopreneur Promotion Program (TePP)</b>; Title of Project: Electrochemical Sensor for Toxic Heavy Metals Analysis in Drinking Water; Amount (In Lakhs): 0.806; Duration:2010-2011</p> <p>8)Funding Agency: <b>DST (Young Scientist Awarded Fast Track Scheme)</b>; Title Of Project: Target Selective Electrochemical Sensor Based on Tricky Designed Chemically Modified Electrodes; Amount (In Lakhs): 19.032; Duration: 2008 to 2011</p>
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12. Ph.D. students : Ongoing: 6 Completed: 13

13. Graduate projects : Ongoing:6 ; Total number :40 Completed: 34

14. Selected publications : Top 10. In the form of **Title, Journal name complete form, DOI, Year. (In the order of Recent to old)**

1	In Situ Electrochemical Trapping and Unraveling the Mechanism of the Toxic Intermediate Metabolite N-Acetyl-p-Benzoquinone Imine of the Acetaminophen Drug and Its Biomimetic Mediated NADH Oxidation Reaction , Journal of Physical Chemistry, <a href="https://doi.org/10.1021/acs.jpcc.3c00307?urlappend=%3Fref%3DPDF&amp;jav=VoR&amp;rel=cite-as">https://doi.org/10.1021/acs.jpcc.3c00307?urlappend=%3Fref%3DPDF&amp;jav=VoR&amp;rel=cite-as</a> , 2023
2	High-Performance Electrocatalytic Reduction and Sensing of Hazardous Hexavalent Chromium Using a Redox-Active Binol Species-Impregnated Carbon Nanofiber-Modified Electrode, Journal of Physical Chemistry , <a href="https://doi.org/10.1021/acs.jpcc.2c00317?urlappend=%3Fref%3DPDF&amp;jav=VoR&amp;rel=cite-as">https://doi.org/10.1021/acs.jpcc.2c00317?urlappend=%3Fref%3DPDF&amp;jav=VoR&amp;rel=cite-as</a> ,2022
3	Facile Electrochemical Demethylation of 2-Methoxyphenol to Surface-Confined Catechol on the MWCNT and Its Efficient Electrocatalytic Hydrazine Oxidation and Sensing Applications, ACS omega, <a href="https://dx.doi.org/10.1021/acsomega.0c01846?ref=pdf">https://dx.doi.org/10.1021/acsomega.0c01846?ref=pdf</a> ,2020
4	Electrochemical Reaction Assisted 2D $\pi$ -Stacking of Benzene on MWCNT Surface and its Unique Redox and Electrocatalytic Properties, ACS Langmuir, <a href="https://doi.org/10.1021/acs.langmuir.9b01970">10.1021/acs.langmuir.9b01970</a> , 2021
5	Improved Electrical Wiring of Glucose Oxidase Enzyme with an in-Situ Immobilized Mn(1,10-Phenanthroline) <sub>2</sub> Cl <sub>2</sub> -Complex/Multiwalled Carbon Nanotube-Modified Electrode Displaying Superior Performance to Os-Complex for High-Current Sensitivity Bio electrocatalytic and Biofuel Cell Applications Applied Biomaterials, <a href="http://dx.doi.org/10.1021/acsabm.8b00584">http://dx.doi.org/10.1021/acsabm.8b00584</a> , 2018
6	In Situ Structural Elucidation and Selective Pb <sup>2+</sup> Ion Recognition of Polydopamine Film Formed by Controlled Electrochemical Oxidation of Dopamine, ACS Langmuir, <a href="http://dx.doi.org/10.1021/acs.langmuir.8b01209">http://dx.doi.org/10.1021/acs.langmuir.8b01209</a> ,2018
7	In Situ Derivatization of an Intrinsic Iron Impurity as a Surface Confined Iron (II)tris(2,2'-bipyridine) Complex on MWCNT and Its Application to Selective Electrochemical Sensing of DNA's Purine Bases, ACS Langmuir, <a href="http://dx.doi.org/10.1021/acs.langmuir.5b00491">http://dx.doi.org/10.1021/acs.langmuir.5b00491</a> , 2015
8	A New Strategy for Direct Electrochemical Sensing of a Organophosphorus Pesticide, Triazophos, Using a Coomassie Brilliant-Blue Dye Surface-Confined Carbon-Black-Nanoparticle Modified Electrode, ACS Applied Nanomaterials, <a href="http://dx.doi.org/10.1021/acsanm.8b00861">http://dx.doi.org/10.1021/acsanm.8b00861</a> ,2018
9	In Situ Immobilized Sesamol-Quinone/Carbon Nanoblack-Based Electrochemical Redox Platform for Efficient Bioelectrocatalytic and Immunosensor Applications Omega, <a href="http://dx.doi.org/10.1021/acsomega.8b01296">http://dx.doi.org/10.1021/acsomega.8b01296</a> , 2018
10	Highly Redox-Active Hematin-Functionalized Carbon Mesoporous Nanomaterial for Electrocatalytic Reduction Applications in Neutral Media, ACS Applied Nanomaterials, <a href="http://dx.doi.org/10.1021/acsanm.8b00337">http://dx.doi.org/10.1021/acsanm.8b00337</a> ,2018

15. Other activities : Not exceedingly more than 5.

i)	2022- Special Issue Editor (along with Prof V. Laxminarayan & Prof Carmel S. Breslin), Electrochemistry of Functionalized Carbon (EFCARBON-2022), Electrochemica Acta, Elsevier.
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