



Dr. J. WILSON
ASSOCIATE PROFESSOR

Contact

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Academic Qualifications

Degree	Institution	Year	Branch	Class
Ph.D.	Alagappa University Karaikudi.	2006	Polymer Science	Awarded
M.Sc.	St. Joseph's College Bharathidasan University Trichy	1994	Physics	Second
B.Sc.	Arul Anandar College, Madurai Kamaraj University Madurai	1991	Physics	First

Teaching Experience : 16 Years

Position	Institution	Duration
Associate Professor	Alagappa University	2020 – Till date
Assistant Professor	Alagappa University	2008 - 2020

Research Experience : 20 years

Academic and Additional Responsibilities

S. No	Position	University Bodies	Period	
			From	To
1.	Counsellor	M.Sc. Bioelectronics Students	2008	Till date
2.	Member	Time Table Committee, Dept of Bioelectronics & Biosensors	2008	Till date
3.	University Representative	Distance Education Examinations	2008	
4.	Member	Incubation And Technology Transfer Center	2016	Till date
5.	Member	Stock Verification Officer	2018 2019	
6.	Member	Squad Team for Examinations of Affiliated Colleges	2018 2019	
7.	Coordinator	Village Placement Programme, Dept. of Bioelectronics & Biosensors	2017	2020
8.	Deputy Director	University Scientific Instrumentation Centre (USIC)	04.01.2018	Till date
Areas of Research				
			024	
10.	Coordinator	Swayam	27.09.2018	Till date

- Conducting polymers
- Metal oxides
- Carbon based materials

- Biosensors
- lithiumbatteries
- Natural polymers
- Metal organic frameworks

Patents Filed

- Method for the preparation of CA-CQDs for electrochemical sensing of epicatechin – Application No. 202341046447 - Published (Journal No. 35/2023 dated:

ResearchSupervision/Guidance

01.09.2023).

ProgramofStudy		Completed	Ongoing
Research	PDF	1	-
	Ph.D.	6	5
	M.Phil.	1	-
Project	PG	46	5

Research group

- 1) R. Sriram Prabha (PDF)
- 2) T. Thenrajan
- 3) S. Girija
- 4) M. Madhu Malar
- 5) M. Anandhakumar
- 6) K. Sneka

Ph.D. Thesis Evaluated/Guided : 6

Ph.D. Thesis Evaluated other Institution : 3

Publications

International		National		Others
Journals	Conferences	Journals	Conferences	Books/Chapters/ Monographs/Manuals
59	60	-	-	5

Publications

Cumulative Impact Factor(asperJCR) : 270
h-index : 24
i10 index : 38
Total Citations : 2248
Thesis Evaluated : 9
Vivavoce Examiner : 1

Funded Research Projects

Ongoing Projects:

S.No	Agency	Period		Project Title	Budget (Rs.In lakhs)
		From	To		
1.	RUSA 2.0- Alagappa University (EIR)	2023 - 2024		Fabrication of non-invasive tattoo based electrochemical glucose sensor	7.0
2.	RUSA 2.0- Alagappa University	2023 - 2024		TBRP - Fabrication of molecular imprinted polymer based composites for Environmental pollution detection	10.0

Completed Projects:

S.No.	Agency	Period		Project Title	Budget (Rs.In lakhs)
		From	To		
1	RUSA- Alagappa University	2019	2020	Translational Health Research for Human, Animal and Plant Systems (TBRP) - Advanced materials for sustainable energy and sensor applications	6.78
2	UGC	2015	2018	Fabrication and characterization of irradiated Polypyrrole polyanilinePPy-PANi nanotubes doped with bimetallic nanoparticles for biomolecule sensing	10.21
3	BRNS-DAE	2015	2018	EBirradiated Polypyrrole-Polyaniline nanotubes doped with bimetallic nanoparticles for biomolecule sensing using microarray elec	14.75

				trodes	
4	DST-SERB	2015	2018	Irradiation of PPy-PEDOT nanotubes doped with bimetallic nanoparticles for biomolecule sensing using micro	30.40
5	UGC	2009	2012	Application of RuO ₂ nanoparticle Doped conducting polymer (Poly-Pyrrole-polyaniline) composite for DNA sensor	10.14
6	RUSA-Alagappa University	2009	2010	Doping of RuO ₂ nanoparticle-chitin Polyaniline composite for DNA Sensors.	0.64

Distinctive Achievements / Awards

- Nature India has published my paper doi:10.1038/nindia.2016.27 Published online 24 February 2016
- Promising Researcher Award – 2022, Alagappa University

Events organized in leading roles

Number of Seminars / Conferences / Workshops / Events organized:

Position	Programme	Duration	Institution
Organizing secretary	Workshop on Metrohm Autolab Electrochemical Instruments for biosensor, energy and corrosion applications	16-02-2015	Alagappa University, Karaikudi
Organizing secretary	National conference on Recent Advancements in Nanomaterials for Sensor Applications (NANOSE-12)	8 th & 9 th March, 2012	Alagappa University, Karaikudi
Organizing secretary	National Seminar on Frontiers in Nanomaterials and Biosensors	4 th & 5 th March, 2010	Alagappa University, Karaikudi
Organizing secretary	National Seminar on Advancements in Bioelectronics and Biosensors	19 th & 20 th March, 2009	Alagappa University, Karaikudi

Events Participated

Number of Conferences / Seminars / Workshops: 95

Overseas Exposure / Visits

- Singapore (2019)
- Malaysia (2017)

- SriLanka(2017)

Membership

Professional Bodies

1. LifeMember:TheIndiansciencecongressAssociation
2. LifeMember:MaterialresearchsocietyofIndia (MRSI)

Ph.D. Thesis Evaluated

1. No.ofPhDThesis evaluated : 9

Ph.D. Thesis Guided

1. No.ofPhDPublic : 6

VivaVoceExaminationconducted

S. No	Name of the Scholar	TitleoftheThesis	Year of Completion
1.	Dr. D. Nathiya	Design And Fabrication of Electrochemical Sensors Based on Polymer Nanoparticles Composites and Extended Gate Field Effect Transistors	2024
2.	Dr. P. Thivya	Nanostructured Conducting Polymer Biocomposite for Electrochemical Detection of Biomolecules	2024
3.	Dr. R. Ramya	Polymer – Nanomaterial Composites for Biomolecules and Pollutants Sensing	2024
4.	Dr. P. Muthukumaran	Development Of Nanostructured Nickel and Ferrite Based Composite Materials Electrochemical Sensor Applications	2018
5.	Dr. C. Sumathi	Design And Development of Novel A-Fe ₂ O ₃ Based Composites for Electrochemical Biosensing Applications	2017
6.	Dr. S. Radhakrishnan	Application Of Conducting Polymers for DNA Sensors	2014

List of Research Articles / Recent Publications

S. No	Authors/Title of the paper/Journal	Impact Factor
1.	Dhananjayan Nathiya, Dilip K Agarwal, Karuppasamy Gurunathan, Subbiah Alwarappan, Jeyaraj Wilson , Tin disulfide nanoflowers and nitrogen doped graphene oxide based extended gate field effect transistor as immunosensors, <i>Microchemical Journal</i> , 199, 109904, 2024	4.8
2.	Chikkili Venkateswara Raju, R Ramya, K Imran, C Kamal Basha, Jeyaraj Wilson , Thulasinathan Boobalan, Alagarsamy Arun, Muthuramalingam Jothi Basu, Soorangkattan Saravanan, Simultaneous electrochemical detection of dopamine and uric acid based on tri-composite of poly-pyrrole and α -Fe ₂ O ₃ embedded MoS ₂ sheets modified electrode, <i>Microchemical Journal</i> , 198, 110189, 2024	4.8
3.	Thatchanamoorthy Thenrajan, Sangeetha Kumaravel, Rajendran Rajaram, Subrata Kundu, Jeyaraj Wilson , Bismuth tungstate nanocomposites for simultaneous detection of hydroquinone and resorcinol, <i>Materials Advances</i> , 5, 1691-1701, 2024	5.0
4.	S Girija, J Wilson , Lipids and Liposomes Delivery of Nutritional Components. In: Rajakumari, R., Thomas, S. (eds) <i>Handbook of Nutraceuticals</i> , Springer, 2024	
5.	S Girija, J Wilson , Trending Metal-Organic Frameworks for the Development of Electrochemical Biosensors, <i>Inorganica Chimica Acta</i> , 121750, 2024	2.8
6.	Thatchanamoorthy Thenrajan, Jeyaraj Wilson , Conducting Polymers Based Nanocomposites for the Environmental Pollutants Detection, <i>Bio and Nanoremediation of Hazardous Environmental Pollutants</i> , 329-340, 2024	
7.	T Thenrajan, Girija Srinivasan, Sangeetha Selvaraj, Subbiah Alwarappan and Wilson Jeyaraj , Electrochemical Detection of Melatonin at Tungsten Oxide Nanospheres Decorated Chitosan	3.9

	Electrode, Journal of The Electrochemical Society 170 077510, 2024	
8.	T Thenrajan, S Nagappan, S Kundu, J Wilson , Nickel iron based layered double hydroxides as effective electrochemical sensor towards Epicatechin, Inorganic Chemistry Communications, 110861, 2024	3.8
9.	T. Thenrajan, Muthaiah Anandhakumar, Mohana Rani Gokana, Vishal Chaudhary, C Venkateswara Raju and Wilson Jeyaraj ; Guar Gum Supported ZIF-8 as an Effective Catalyst for Electrochemical Sensing of Gallic Acid in Liquid Food Samples; Journal of the electrochemical society, 2023	3.9
10.	ThatchanamoorthyThenrajan, Subbiah Alwarappan and Jeyaraj Wilson ; Molecular Diagnosis and Cancer Prognosis—A Concise Review; Diagnostics, 13, 766, 2023	
11.	S. Dheepthi GunaVathana, Shibasini Murugan, S Girija, J Wilson , Kavitha Thangavel and A Cyrac Peter, Palladium nanospheres incorporated polythiophene nanocomposite: Investigation of potency promising antimicrobial efficacy, Inorganic Chemistry Communications, 144, 109867, 2022	3.8
12.	S. Girija, S Sam Sankar, Subrata Kundu and J. Wilson , Selective Determination of Catechol Using One Dimensional Zeolitic Cobalt–Nickel Imidazolate Framework, Journal of Inorganic and Organometallic Polymers and Materials, 32, 3837, 2022	4.0
13.	ThatchanamoorthyThenrajan and Jeyaraj Wilson , Biosensors for cancer theranostics; Biosensors and Bioelectronics: X, 100232, 2022	
14.	ThatchanamoorthyThenrajan, Sam Sankar Selvasundarasekar, Subrata Kundu and Jeyaraj Wilson , Novel Electrochemical Sensing of Catechins in Raw Green Tea Extract via a Trimetallic Zeolitic Imidazolate Fibrous Framework, ACS omega, 7, 19754, 2022	4.0

15.	S Dheepthi Gunavathana, S Girija, J Wilson , A Cyrac Peter, ZnO nanorods bonded polythiophene nanocomposite: an enhanced electrochemical voltammetric biosensing of L-tryptophan, Bulletin of Materials Science, 45, 57, 2022	1.8
16.	ThatchanamoorthyThenrajan, Selvasundarsekar Sam Sankar, Subrata Kundu, Jeyaraj Wilson , Bimetallic nickel iron zeolitic imidazolate fibers as biosensing platform for neurotransmitter serotonin, Colloid and Polymer Science, 300, 223, 2022	2.4
17.	Thatchana Moorthy Thenrajan, Sriramprabha Ramasamy, Pandi Keerthika Chidambaram, Jeyaraj Wilson , A green approached biocomposite: Iron (III) oxide dissemination over cassava starch for selective detection of epinephrine, Materials Chemistry and Physics, 276, 125366, 2022	4.7
18.	J. Wilson , D. Nathiya, Fabrication of nitrogen doped graphene decorated extended gate field effect transistor: Application in protein sensor, ACS Fall 2022, 2022	
19.	Pannerselvam Thivya, ThatchanamoorthyThenrajan, Rajendran Ramya, Jeyaraj Wilson , Polyaniline/sulfonated cassava starch: A green biocomposite for sensing of pyridoxine, Current Research in Biotechnology , 4, 309, 2022	5.6
20.	R Ramya, D Nathiya, P Thivya, J Wilson , Functionally anchored Ag-TiO ₂ nanoparticles on guar gum-based nanocomposite for simultaneous determination of hydroquinone, catechol, resorcinol and nitrite, Microchemical Journal, 170, 106734, 2021	4.8
21.	Nathiya Dhananjayan, Karthika Viswanathan, Wilson Jeyaraj , Arumugam Ayyakannu, Gurunathan Karuppasamy, Antibiofilm and antimicrobial efficacy evaluation of polypyrrole nanotubes embedded in aminated gum acacia-based nanocomposite, IET nanobiotechnology, 15, 441, 2021	2.3
22.	R Ramya, P Thivya, D Nathiya, J Wilson , Polypyrrole and enzyme free cholesterol flakes-based composite: Selective determination of theophylline Journal of Pharmaceutical and	3.4

	Biomedical Analysis, 199, 114065, 2021	
23.	S Dheepthi GunaVathana, J Wilson , R Prashanthi, A Cyrac Peter, CuO nanoflakes anchored polythiophene nanocomposite: Voltammetric detection of L-Tryptophan, Inorganic Chemistry Communications, 124, 108398, 2021	3.8
24.	ThatchanamoorthyThenrajan, Selvasundarsekar Sam Sankar, Girija Srinivasan, Subrata Kundu, Jeyaraj Wilson , Cobalt-iron zeolitic imidazolate frameworks (ZIFs) as microfibers for the effective detection of hydroquinone, Dalton Transactions, 50, 10540, 2021	4.5
25.	S Girija, S Sam Sankar, T Thenrajan, Subrata Kundu, J Wilson , Bi-metallic zeolite imidazole framework nanofibers for the selective determination of Cd ²⁺ ions, Journal of Materials Chemistry B, 9, 5656, 2021	7.0
26.	R Sriramprabha, M Sekar, R Revathi, C Viswanathan, J Wilson , Fe ₂ O ₃ /polyaniline supramolecular nanocomposite: A receptor free sensor platform for the quantitative determination of serum creatinine, Analytica Chimica Acta, 1137, 103, 2020	6.9
27.	S. Girija, S. Sam Sankar, Subrata Kundu, J. Wilson , Microfibers of Embellished Cobalt-Zeolite Imidazole Framework for Vitamin-B ₂ Detection, Journal of Electrochemical Society, 167, 137511, 2020	3.9
28.	P Thivya, R Ramya, J. Wilson , Poly (3, 4-ethylenedioxythiophene)/Taurine biocomposite on screen printed electrode: non-enzymatic Cholesterol biosensor, Microchemical Journal, 157, 105037, 2020	4.8
29.	S Dheepthi GunaVathana, P Thivya, J Wilson , A Cyrac Peter, Sensitive voltammetric sensor based on silver dendrites decorated polythiophene nanocomposite: Selective determination of L-Tryptophan, Journal of Molecular Structure, 1205, 127649, 2020	3.8

30.	Dhananjayan Nathiya, Karuppasamy Gurunathan, Jeyaraj Wilson , Size controllable, pH triggered reduction of bovine serum albumin and its adsorption behavior with SnO ₂ /SnS ₂ quantum dots for biosensing application, Talanta, 210, 120671, 2020	6.1
31.	G Vinodhkumar, J Wilson , SSR Inbanathan, I Vetha Potheher, Muthupandian Ashokkumar, A Cyrac Peter, Solvothermal synthesis of magnetically separable reduced graphene oxide/Fe ₃ O ₄ hybrid nanocomposites with enhanced photocatalytic properties, Physica B: Condensed Matter, 580, 411752, 2020	2.8
32.	R Sriramprabha, M Sekar, Wilson Jeyaraj , N Ponpandian, C Viswanathan, Mesoporous nickel oxide nanostructures: Influences of crystalline defects and morphological features on mediator free electrochemical monosaccharide sensor application, Nanotechnology, 2020	3.5
33.	P.Thivya Wilson Jeyaraj , Ramya R, Environmental pollutants simultaneous determination: DNA catalyst mediated polyaniline biocomposite nanostructures, Biocatalysis and Agricultural Biotechnology,21, 101352, 2019	4
34.	Wilson Jeyaraj , Gurunathan Karuppasamy, Nathiya Dhananjayan, Interactive Studies on Synthetic Nanopolymer decorated with Edible Biopolymer and its Selective Electrochemical determination of L-Tyrosine, scientific reports, 9, 13287, 2019	4.6
35.	G.Vinodhkumar, J. Wilson , S.Mahalakshmia, V.Ragavendran, A. CyracPeter, One step solvothermal synthesis and characterization of rGO/NiO nanocomposites, Materials Today Proceedings, 2019	
36.	P Thivya, J Wilson , Electron rays irradiated polyaniline anchored over bovine serum albumin for simultaneous detection of epinephrine and uric acid, Microchemical Journal, 145, 883-891, 2019	4.8

37.	P Muthukumaran, R Ramya, P Thivya, J Wilson , G Ravi, Nanocomposite based on restacked crystallites of β -NiS and Ppy for the determination of theophylline and uric acid on screen-printed electrodes, <i>New Journal of Chemistry</i> , 43, 19397-19407, 2019	3.3
38.	R Ramya, P Muthukumaran, J Wilson , Electron beam-irradiated polypyrrole decorated with Bovine serum albumin pores: Simultaneous determination of epinephrine and L-tyrosine, <i>Biosensors and Bioelectronics</i> , 108, 53-61, 2018	12.6
39.	Nathiya Dhananjayan, Muthukumaran Palanisamy, Wilson Jeyaraj , Gurunathan Karuppasamy, Stable and robust nanobiocomposite preparation using aminated guar gum (mimic activity of graphene) with electron beam irradiated polypyrrole and Ce-Ni bimetal: Effective role in simultaneous sensing of environmental pollutants and pseudocapacitor applications, <i>Electrochimica Acta</i> , 246, 484-496, 2017	6.6
40.	Dhanasekaran Solairaj, Palanivel Rameshthangam, Palanisamy Muthukumaran, Jeyaraj Wilson , Studies on electrochemical glucose sensing, antimicrobial activity and cytotoxicity of fabricated copper nanoparticle immobilized chitin nanostructure, <i>International journal of biological macromolecules</i> , 101, 668-679, 2017	8.2
41.	J. Wilson* and G. Ravi P. Muthukumaran, C. Sumathi, Enzymeless biosensor based on b-NiS@rGO/Au nanocomposites for simultaneous detection of ascorbic acid, epinephrine and uric acid, <i>RSC Advances</i> , 6, 96467-96478, 2016	3.9
42.	C Sumathi, C Venkateswara Raju, P Muthukumaran, J Wilson , G Ravi, Au-Pd bimetallic nanoparticles anchored on α -Fe ₂ O ₃ nonenzymatic hybrid nanoelectrocatalyst for simultaneous electrochemical detection of dopamine and uric acid in the presence of ascorbic acid, <i>Journal of Materials Chemistry B</i> , 4, 2561-2569, 2016	7.0
43.	C Sumathi, P Muthukumaran, P Thivya, J Wilson , G Ravi, DNA	3.9

	mediated electrocatalytic enhancement of α -Fe ₂ O ₃ -PEDOT-C-MoS ₂ hybrid nanostructures for riboflavin detection on screen printed electrode, RSC Advances, 6, 81500-81509, 2016	
44.	Sathish Rajendran, Muthukumaran P, Chikkili Venkateswara Raju, Sumathi C, S, Ravi G, Solairaj D, Rameshthangam P, Wilson J , Subbiah Alwarappan, Cerium doped nickel oxide nanostructures for riboflavin biosensing and antibacterial applications, New Journal of Chemistry, 40, 2741-2748, 2016	3.3
45.	C Sumathi, P Muthukumaran, S Radhakrishnan, G Ravi, J Wilson , Riboflavin detection by α -Fe ₂ O ₃ /MWCNT/AuNPs-based composite and a study of the interaction of riboflavin with DNA, RSC Advances, 5, 17888-17896, 2015	3.9
46.	Sivaprakasam Radhakrishnan, Karthikeyan Krishnamoorthy, Chinnathambi Sekar, Jeyaraj Wilson , Sang Jae Kim, A promising electrochemical sensing platform based on ternary composite of polyaniline-Fe ₂ O ₃ -reduced graphene oxide for sensitive hydroquinone determination, Chemical Engineering Journal, 259, 594-602, 2015	15.1
47.	R Kumar, MS Chauhan, GN Dar, SG Ansari, J Wilson , Ahmad Umar, S Chauhan, DS Rana, P Sharma, ZnO nanoparticles: Efficient material for the detection of hazardous chemical, Sensor letters, 12, 1393-1398, 2014	
48.	S Radhakrishnana, K Krishnamoorthy, C Sekar, J Wilson , SJ Kim, A highly sensitive electrochemical sensor for nitrite detection based on Fe ₂ O ₃ nanoparticles decorated reduced graphene oxide nanosheets, Appl. Cat. B: Environ, 148, 22-28, 2014	22.1
49.	C Sumathi, P Muthukumaran, S Radhakrishnan, J Wilson , Ahmad Umar, Controlled growth of single-crystalline nanostructured dendrites of α -Fe ₂ O ₃ blended with MWCNT: a systematic investigation of highly selective determination of l-dopa, RSC Advances, 4, 23050-23057, 2014	3.9
50.	P Muthukumaran, C Sumathi, J Wilson , C Sekar, SG Leonardi,	

	G Neri, Fe ₂ O ₃ /Carbon nanotube-based resistive sensors for the selective ammonia gas sensing, Sensor letters, 12, 17-23, 2014	
51.	S Radhakrishnan, C Sumathi, Ahmad Umar, Sang Jae Kim, J Wilson , V Dharuman, Polypyrrole–poly (3, 4-ethylenedioxythiophene)–Ag (PPy–PEDOT–Ag) nanocomposite films for label-free electrochemical DNA sensing, Biosensors and Bioelectronics, 47, 133-140, 2013	10.6
52.	S Radhakrishnan, C Sumathi, V Dharuman, J Wilson , Gold nanoparticles functionalized poly (3, 4-ethylenedioxythiophene) thin film for highly sensitive label free DNA detection, Analytical Methods, 5, 684-689, 2013	3.5
53.	S Radhakrishnan, C Sumathi, V Dharuman, J Wilson , Polypyrrole nanotubes–polyaniline composite for DNA detection using methylene blue as intercalator, Analytical Methods, 5, 1010-1015, 2013	3.5
54.	J Wilson , S Radhakrishnan, C Sumathi, V Dharuman, Polypyrrole–polyaniline–Au (PPy–PANi–Au) nano composite films for label-free electrochemical DNA sensing, Sensors and Actuators B: Chemical, 171, 216-222, 2012	8.4
55.	V Dharuman, K Vijayaraj, S Radhakrishnan, T Dinakaran, J Shankara Narayanan, M Bhuvana, J Wilson , Sensitive label-free electrochemical DNA hybridization detection in the presence of 11-mercaptoundecanoic acid on the thiolated single strand DNA and mercaptohexanol binary mixed monolayer surface, Electrochimica acta, 56, 8147-8155, 2011	6.6
56.	A Manuel Stephan, Kee Suk Nahm, M Anbu Kulandainathan, G Ravi, J Wilson Electrochemical studies on nanofiller incorporated poly (vinylidene fluoride–hexafluoropropylene)(PVdF–HFP) composite electrolytes for lithium batteries, Journal of applied electrochemistry, 36, 1091-1097, 2006	2.9
57.	A Manuel Stephan, Kee Suk Nahm, T Prem Kumar, M Anbu Kulandainathan, G Ravi, J Wilson , Nanofiller incorporated	9.2

	poly (vinylidene fluoride–hexafluoropropylene)(PVdF–HFP) composite electrolytes for lithium batteries, Journal of power sources, 159, 1316-1321, 2006	
58.	A Manuel Stephan, Kee Suk Nahm, M Anbu Kulandainathan, G Ravi, J Wilson , Poly (vinylidene fluoride-hexafluoropropylene) (PVdF-HFP) based composite electrolytes for lithium batteries, European Polymer Journal , 42, 1728-1734, 2006	3.8
59.	J Wilson , G Ravi, M Anbu Kulandainathan, Electrochemical studies on inert filler incorporated poly (vinylidene fluoride-hexafluoropropylene)(PVDF-HFP) composite electrolytes, Polimeros, 16, 88-93, 2006	1.6

Resource persons in various capacities

National Conferences	:	4
International Conferences	:	21
Invited Lectures	:	20