



Dr. J. Wilson
Assistant Professor

Contact

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Academic Qualifications: M.Sc., Ph.D.

| S.No | Degree | College and University | Year | Subject | Percentage |
|------|--------|---|------|--------------------|---------------------|
| 1 | B.Sc | Arul Anandar College Madurai Kamaraj University Madurai | 1991 | Physics | 79% |
| 2 | M.Sc | St.Joseph's College Bharathidasan University Trichy | 1994 | Physics | 68% |
| 3 | Ph.D | Alagappa University Karaikudi. | 2006 | Polymer Science | Highly Commented |

Teaching Experience: 8 Years

| Designation and Research Institution | From | To | Duties and Responsibilities |
|--------------------------------------|------|-----------|---|
| Assistant Professor | 2008 | Till date | Teaching and research in the field of Bioelectronics and Biosensors |

Additional Responsibilities

1. Member-Incubation and technology transfer centre- Alagappa University, Karaikudi.
2. Member-Stock verification officer, Alagappa University, Karaikudi.
3. Member-Squad team for examinations of affiliated colleges, Alagappa University, Karaikudi.
4. Co-ordinator, Village placement programme, Dept of Bioelectronics & Biosensors,
5. University Representative-Distance education examinations, Alagappa University, Karaikudi.
6. Counsellor- M.Sc. Bioelectronics students, Alagappa University, Karaikudi.
7. Member - Time table committee, Dept of Bioelectronics & Biosensors.

Areas of Research

Conducting polymers, Metal oxides, Carbon based materials, Biosensors, lithium batteries

Research Supervision / Guidance

| | Program of Study | Completed | Ongoing |
|----------|------------------|-----------|---------|
| Research | Ph.D. | 1 | 5 |
| | M.Phil. | 2 | - |
| Project | PG | 10 | 2 |

Publications

| International | | National | | Others |
|---------------|-------------|----------|-------------|---|
| Journals | Conferences | Journals | Conferences | Books / Chapters / Monographs / Manuals |
| 19 | 4 | - | 10 | - |

| | |
|--|--------------|
| Cumulative Impact Factor (as per JCR) : | 69.6 |
| h-index | : 10 |
| i10 index | : 10 |
| Total Citations | : 447 |

Funded Research Projects

Completed Projects

| S. No | Agency | Period | | Project Title | Budget (Rs. In lakhs) |
|-------|---------------------|--------|------|--|-----------------------|
| | | From | To | | |
| 1 | UGC | 2009 | 2012 | Application of RuO ₂ nanoparticle Doped conducting polymer(Poly-Pyrrole-polyaniline) composite for DNA sensor | 10.14 |
| 2 | Alagappa University | 2009 | 2010 | Doping of RuO ₂ nanoparticle-chitin Polyaniline composite for DNA Sensors. | 0.64 |

Ongoing Projects

| S. No | Agency | Period | | Project Title | Budget (Rs. In lakhs) |
|-------|--------|--------|------|--|-----------------------|
| | | From | To | | |
| 1 | BRNS | 2015 | 2018 | EB irradiated Polypyrrole-Polyaniline nanotubes doped with bimetallic nanoparticles for biomolecules sensing using microarray electrodes | 14.75 |
| 2 | DST | 2015 | 2018 | Irradiation of PPy-PEDOT nanotubes doped with bimetallic nanoparticles for biomolecules sensing using micro | 30.40 |

| electrodes | | | | | |
|------------|-----|------|------|--|-------|
| 3 | UGC | 2015 | 2018 | Fabrication and characterization of irradiated Polypyrrole-Polyaniline PPy-PANi nanotubes doped with bimetallic nanoparticles for biomolecules sensing | 10.21 |

Distinctive Achievements / Awards

1. Nature India has published my paper doi:10.1038/nindia.2016.27 Published online 24 February 2016

Events organized in leading roles

Number of Seminars / Conferences / Workshops / Events organized:

Organizing secretary in

1. National Seminar on Advancements in Bioelectronics and Biosensors, 19th & 20th March, 2009, Alagappa University, Karaikudi 630 003, India
2. National Seminar on Frontiers in Nanomaterials and Biosensors 4th & 5th March, 2010, Alagappa University, Karaikudi 630 003, India
3. National conference on Recent Advancements in Nanomaterials for Sensor Applications (NANOSE-12), 8th & 9th March, 2012, Alagappa University, Karaikudi 630 003, India
4. Organized one day workshop on Metrohm Autolab Electrochemical Instruments for biosensor, energy and corrosion applications , 16-02-2015, Alagappa University, Karaikudi, India

Events Participated

Conferences / Seminars / Workshops: 30

1. Conferences- 15
2. Seminars- 12
3. Workshops- 3

Other Training Programs

1. Orientation Programme-1
2. Refresher Course in Life Sciences- 2

Overseas Exposure / Visits

1. Singapore in 2015
2. Malaysia in 2015

Membership in

Professional Bodies

1. Life Member: The Indian science congress Association
2. Life Member: Material research society of India (MRSI)

Academic Bodies (such as Board of Studies etc.,)

1. Member-Board of Studies, M.Sc Electronics, Alagappa University, Karaikudi.

Resource persons in various capacities

Number of Invited Lectures delivered: 3

Others

No. of PhD Public Viva Voce Examination conducted : 1

Recent Publications

1. P. Muthukumar, C. Sumathi, **J. Wilson** and G. Ravi, 2016, Enzymeless biosensor based on β -NiS@rGO/Au nanocomposites for simultaneous detection of Ascorbic acid, Epinephrine and Uric acid, **RSC Advances**, 6, 96467-96478. (Impact Factor: 3.2).
2. C.Sumathi, P.Muthukumar, P.Thivya, **J.Wilson** and G.Ravi, 2016, DNA mediated electrocatalytic enhancement of α -Fe₂O₃-PEDOT-C-MoS₂ hybrid nanostructures for riboflavin detection on screen printed electrode **RSC Advances**, 6, 81500-81509. (Impact Factor: 3.2).
3. C. Sumathi, C. Venkateswara Raju, P. Muthukumar, **J. Wilson** and G. Ravi, 2016, Au-Pd bimetallic nanoparticles anchored on α -Fe₂O₃ non enzymatic hybrid nano electrocatalyst for simultaneous electrochemical detection of dopamine and uric acid in the presence of ascorbic acid. **J. Mater. Chem. B**, 4, 2561-2569. (Impact Factor: 4.8).

4. Muthukumar P. Chikkili Venkateswara Raju, Sumathi C. Ravi G. Solairaj D. Rameshthangam P. **Wilson J**, Sathish Rajendran and Subbiah Alwarappan, 2016, Cerium doped nickeloxide nanostructures for riboflavin biosensing and antibacterial applications. **New J. Chem.**, 40, 2741. (Impact Factor: 3.2).
5. C. Sumathi, P. Muthukumar, S. Radhakrishnan, G. Ravi, J. Wilson, 2015, Riboflavin detection by α -Fe₂O₃/MWCNT/AuNPs-based composite and a study of the interaction of riboflavin with DNA, **RSC Advances**, 5, 17888–17896. (Impact Factor: 3.2).
6. Sivaprakasam Radhakrishnan, Karthikeyan Krishnamoorthy, Chinnathambi Sekar, Jeyaraj Wilson, Sang Jae Kim, 2015, A promising electrochemical sensing platform based on ternary composite of polyaniline–Fe₂O₃–reduced graphene oxide for sensitive hydroquinone determination, **Chemical Engineering Journal** 259, 594–602. (Impact Factor: 4.3).
7. P. Muthukumar, C. Sumathi, J. Wilson, C. Sekar, S. G. Leonardi, G. Neri, 2014, Fe₂O₃/Carbon Nanotube-Based Resistive Sensors for the Selective Ammonia Gas Sensing. **Sensor letters**, 12, 1–7. (Impact Factor: 0.6).
8. R. Kumar, M. S. Chauhan, G. N. Dar, S. Ansari, J. Wilson, Ahmad Umar, S. Chauhan, D. S. Rana, and P. Kumar, 2014, ZnO Nanoparticles: Efficient Material for the Detection of Hazardous Chemical, **Sensor letters**, 12, 1–6. (Impact Factor: 0.6).
9. Radhakrishnan, Krishnamoorthy, Sekar, Wilson, Sang Jae Kim, 2014, A highly sensitive electrochemical sensor for nitrite detection based on Fe₂O₃ nanoparticles decorated reduced graphene oxide nanosheets. **Applied Catalysis B: Environmental**, 148– 149 22– 28. (Impact Factor: 7.4).
10. C. Sumathi, P. Muthukumar, S. Radhakrishnan, J. Wilson, 2014, Controlled growth of single-crystalline nanostructured dendrites of α -Fe₂O₃ blended with MWCNT: a systematic investigation of highly selective determination of L-dopa, **RSC Advances**, 4, 23050–23057. (Impact Factor: 3.2).
11. S. Radhakrishnan, C. Sumathi, **J. Wilson**, V. Dharuman, 2013, Polypyrrole-poly(3,4-ethylenedioxythiophene)-Ag (PPy-PEDOT-Ag) nano composite films for label-free electrochemical DNA sensing, **Biosensors and Bioelectronics**, 47, 133–140. (Impact Factor: 6.5).
12. S. Radhakrishnan, C. Sumathi, V. Dharuman, **J. Wilson**, 2013, Polypyrrole nanotubes-polyaniline composite for DNA detection using methylene blue as intercalator, **Analytical Methods**, 5, 1010–1015. (Impact Factor: 1.9).
13. S. Radhakrishnan, C. Sumathi, V. Dharuman, **J. Wilson**, 2013, Gold nanoparticles functionalized poly(3,4- ethylenedioxythiophene) thin film for highly sensitive label free DNA detection, **Analytical Methods**, 5, 684–689. (Impact Factor: 1.9).
14. **J. Wilson**, S. Radhakrishnan, C. Sumathi, V. Dharuman, 2012, Polypyrrole-Polyaniline–Au (PPy-PANi-Au) nanocomposite films for label-free electrochemical DNA sensing, **Sensors and Actuators B**, 171–172, 216–222. (Impact Factor: 3.7).
15. V. Dharuman, K. Vijaya Raj, S. Radhakrishnan, T. Dinakaran, J. Shankara Narayan, M. Bhuvana, **J. Wilson**, 2011, Sensitive label free electrochemical DNA hybridization detection in the presence of 11 MU acid on the thiolated ssDNA and mercaptohexanol binary mixed monolayer surface, **Electrochimica Acta**, 56, 8147-8155. (Impact Factor: 4.5).
16. A. Manuel Stephen, Kee Suk Nahm, M. Anbukulandainathan, G. Ravi, **J. Wilson**, 2006, Electrochemical Studies on Nanofiller Incorporated Poly (Vinylidene Fluoride-

Hexafluoropropylene) (PvDF-HFP) Composite Electrolytes for Lithium Batteries, **Journal of Applied Electrochemistry**. 36, 1091-1097. (Impact Factor: 2.4).

17. A. Manuel Stephen, Kee Suk Nahm, T. Prem kumar, M. Anbukulandainathan, G. Ravi, **J. Wilson**, 2006, Poly(Vinylidene Fluoride-Hexafluoropropylene)(PvDF-HFP) Based Composite Electrolytes for Lithium Batteries. **Journal Power Sources**. 159, 1316-1321. (Impact Factor: 6.2).
18. A. Manuel Stephen, Kee Suk Nahm, M. Anbukulandainathan, G. Ravi, **J. Wilson**, 2006, Nanofiller Incorporated (PvDF-HFP) Composite Electrolytes for Lithium Batteries. **European Polymer Journal**, 42, 1728-1734. (Impact Factor: 3).
19. **J. Wilson**, G. Ravi and M. Anbukulandainathan, 2006, Electrochemical Studies on Inertfiller Incorporated Poly (Vinylidene Fluoride-Hexafluoropropylene)(PvDF-HFP) Composite Electrolytes. **Polymeros**, 16, 88-93. (Impact Factor: 0.5).