



Prof. V. DHARUMAN
Director i/c
Alagappa Institute of Skill Development

Contact

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Development, Alagappa University
Karaikudi-630 003
Tamil Nadu, INDIA

Employee Number : No. 37401

Date of Birth : 26-06-1968

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Academic Qualifications: M.A./M.Sc./M.Phil./Ph.D./

| S.No | Degree | College and University | Year | Subject | Percentage |
|------|--------|------------------------|------|-----------|------------|
| 1 | Ph.D., | University of Madras | 2002 | Chemistry | Awarded |
| 2 | M.Sc., | University of Madras | 1991 | Chemistry | II class |

Teaching Experience: 15 Years

| Designation and Research Institution | Period | | Duties and Responsibilities |
|--------------------------------------|--------|-----------|--|
| | | | |
| Associate Professor | 2020 | Till date | Teaching and research in the field of Bioelectronics and Biosensors/Material Science |
| Assistant Professor | 2008 | 2020 | Teaching and research in the field of Bioelectronics and Biosensors/Material Science |

Research Experience: 21 Years

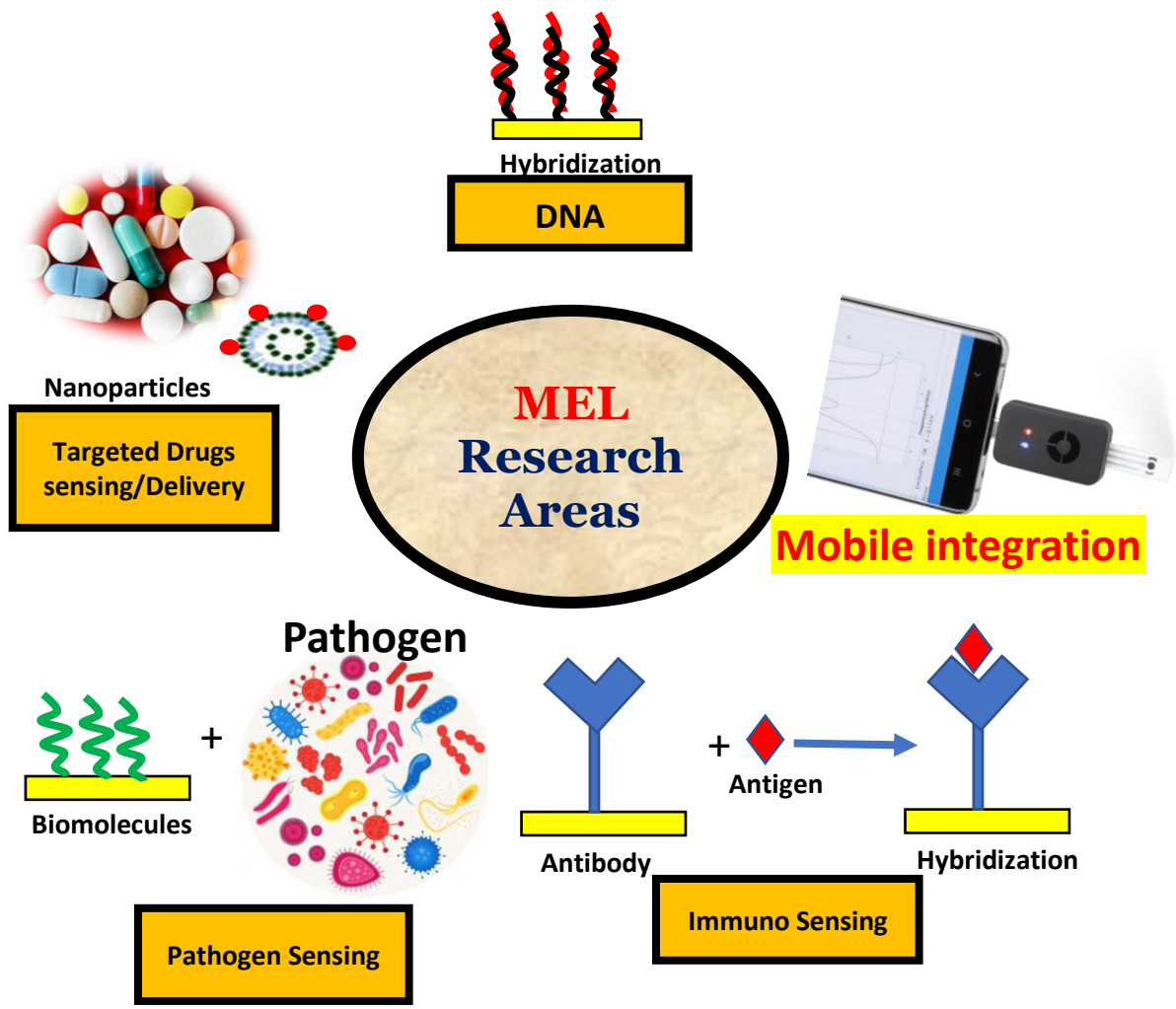
| Designation | Research Institution | From | To |
|--------------------------------------|---|----------------------------|---|
| Teacher cum Research and Development | Alagappa University | June 2008 | till |
| Post-doctoral Research Scientist | Pohang University of Science and Technology SOUTH KOREA | 8 th Aug. 2007 | 15 th June 2008 (11 Months) |
| Research Scientist | Advanced Institute of Industrial Science and Technology (AIST), JAPAN | 16 th Oct 2006 | 31 st March. 2007 (6 months) |
| Post-doctoral Research Scientist | Pohang University of Science and Technology SOUTH KOREA | 13 th Dec. 2004 | 10 th Oct. 2006 (1 y 10 months) |
| Post-doctoral Research Scientist | Fraunhofer Institute for Silicon Technology, GERMANY | 17 th Sep. 2001 | 30 th Nov. 2004 (3 y 2 months) |

Additional Responsibilities

| S.No | College and University | Year |
|------|--|------|
| 1 | Dept. NAAC coordinator | 2014 |
| 2 | NIRF Coordinator | 2017 |
| 3 | Dept. Cultural club coordinator | 2016 |
| 4 | Deputy Director for University Scientific Instrumentation Centre | 2017 |
| 5 | Deputy Coordinator (STRIDE CELL) | 2018 |
| 6 | Deputy Coordinator (Innovation and Incubation cell) | 2022 |

Areas of Research

- Biosensor /chemical sensors/ mobile integration
 - Glucose sensors for diabetic monitoring
 - DNA, antibody (immune) sensors for cancer diagnosis
 - Bacterial and viral (Pathogen) and neurological disorders
 - Electrochemical theragnostic devices for drug delivery and sensing
 - Molecular Self-assembly for electronics
 - Transducer materials development lipid nanoparticles, metal oxides, polymer composites, graphene, nanocarbon (nanotube, sheets, nanodots)



Research Supervision / Guidance

| Program of Study | | Completed | Ong oing |
|------------------|----------------|-----------|----------|
| Research | Ph.D. | 8 | 2 |
| | M.Phil. | 2 | - |
| | | | - |
| | PDF | | 2 |
| | Project Fellow | | 1 |
| Project | PG | 37 | 7 |

Research Group:

Post-Doctoral Fellow

1. Dr. V. Sudha, D. S. Kothari Post Doctoral Fellow, 2022-2024
2. Dr. K. Duraimurugan, RUSA Post Doctoral Fellow, 2020 – 2021
3. Dr. Mahendra Prabhu, D. S. Kothari Post Doctoral Fellow, 2016-2017

PhD scholars

1. K. Jayakumar, Project Fellow
2. J. Shankaranarayanan, Project Fellow
3. M. Bhuvana, Project Fellow
4. C. Anjalidevi
5. P. Manikandan, DST Inspire Fellow
6. H. Imran , Project Fellow
7. K. P. Divya, DST Inspire Fellow
8. A. Anancia Grace, Project Fellow
9. Y. Allwin Richard, ICMR Fellow
10. S. Aniu Lincy , Project Fellow

Ph.D's Guided

| S. No. | Name of the Candidate | Year | Title of Thesis |
|--------|--------------------------|------|--|
| 1. | Dr. K. Jayakumar | 2014 | Construction And Characterization Of Graphene Core-Lower Generation poly(Amidoamine) Dendrimer Gold Nanoparticle Composite For Electrochemical DNA Sensing |
| 2. | Dr. J. Shankaranarayanan | 2014 | Non-Enzymatic Glucose Sensing at Ruthenium Oxide-Polymer-Nano Carbon Composites |
| 3. | Dr. M. Bhuvana | 2014 | Thered Spherical Liposome-Gold Nanoparticles On Thiol Momolayer Modified Gold Transducer For DNA Sensing |
| 4. | Dr. C. Anjalidevi | 2014 | Non-Enzymatic Hydrogen Peroxide Sensing At Metal (Ruthenium, Tin, And Zirconium) Oxide Suported Gold Nanoparticles |
| 5. | Dr. P. Manikandan | 2019 | Non-enzymatic Diagnosis of Diabetes Jaundice and Neurological Diseases Using Metal Oxide Polymer Hybrid Electrodes |
| 6. | Dr. H. Imran | 2019 | Graphene –Gold Nanoparticle – Liposome Composite for Label Free Electrochemical DNA and Dopamine Sensing. |
| 7. | Dr. K. P. Divya | 2019 | Label Free DNA and Protein Sensing at Lipid Bilayer- Nanoparticle Tethered on Thiol Manolayers |
| 8. | Dr. A. Anancia Grace | 2022 | Titanium Dioxide –Medal (Mn,W, Sn,Gd) Oxide –Graphene Composite Modified Electrodes for Electrochemical Sensing of Neuro and Pharmaceutical Chemicals. |

| International | | National | | Other s |
|---------------|-------------|----------|-------------|-------------------|
| Journals | Conferences | Journals | Conferences | Books Chapters |
| 61 | 72 | 3 | 66 | 4 |

Cumulative Impact Factor (as per JCR) : 396.12
h-index : 26
i10 index : 46
Total Citations : 1733

Ph. D Thesis Evaluated / Viva voce Examiner

Thesis Evaluated : 13
Viva voce Examiner : 4

Funded Research Projects

Ongoing Projects

| S. No | Agency | Period | Project Title | Budget (Rs. In Lakhs) |
|-------|----------|--------|---|-----------------------|
| 1 | RUSA EIR | 2023 | Cost effective renewable diabetic sensor for home and personal care | 3.55 |
| 2 | RUSA 2.0 | 2018 | Advanced materials for sustainable energy and sensor applications | 33.00 |

Completed Projects

| S.No | Agency | Period | Project Title | Budget (Rs. In lakhs) |
|------|--------|-----------|--|-----------------------|
| 1 | DST | 2015-2018 | Development of novel graphene and metal nano composite films and characterization for label free electrochemical DNA-protein sensing | 44.7 |

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|---|------|-----------|--|-------|
| 2 | UGC | 2015-2018 | Studies on membrane proteins interactions on liposome-DNA-gold nanoparticle composite tethered on goldtransducer for biosensing | 14.65 |
| 3 | ICMR | 2013-2016 | Development of Simple, Reagentless, Renewable Glucose Sensors Using NanoRuthenium oxide- nono pore Polymer – Nano Au Composite Films | 32.79 |
| 4 | AURF | 2010-2011 | Electrochemical Detection of Antibody Prostate Specific Antigen InteractionsUsing Gold Transducers | 0.64 |
| 5 | DST | 2010-2013 | Liposome mediated cancer DNA sensingof electrochemical and pizeo electric techniques and DNA transfection studies | 25.44 |
| 6 | CSIR | 2010-2013 | Development of Electrochemical immunosensors for simultaneous detections and discriminations of different food pathogenic bacterial microbes on microgold arrays | 18.16 |
| 7 | UGC | 2009-2011 | Multi Component Thiol alkane Diluent -DNA Mixed Monolayers for Efficient Label Free Electrochemical Detection of Cancer DNA–P53 Protein interactions | 9.8 |

Number of Seminars / Conferences / Workshops / Events organized:**Events organized in leading roles**

| S.No | Award | Year |
|-------------|---|-------------|
| 1. | Best poster award, One Day Workshop on Poster Exhibition of Innovative Ideas and Display of Prototype Device Innovation Ambassador Linkage | 2022 |
| 2. | Best oral award, National Conference on advances in functional materials, SSN college of engineering, Chennai | 2019 |
| 3. | Best poster award, Nano/Biotechnology | 2019 |
| 4. | Best poster award, National Conference on Futuristic Materials (NCFM) | 2017 |
| 5. | Best poster award, International conference on recent advance in materials and chemical sciences (ICRAMCS) | 2015 |
| 6. | Alagappa Excellence Award for Research | 2016 |
| 7. | Best poster award, Indo-Japan workshop on Biomolecular Electronics & Organic Nanotechnology for Environment Preservation (IJWBME) | 2013 |
| 8. | Young Biomedical Scientist Research Fellowship by Indian Council of Medical Research | 2013 |
| 9. | Article Gold nano particle decorated graphene core first generation PAMAM dendrimer for label free electrochemical DNA hybridization sensing, Biosens. Bioelectr., 31 (2012) 406-412. Ranked 16th on the TOP 25 articles in the Journal of Biosensors and Bioelectronics, | 2012 |
| 10. | Fraunhofer Research Achievement Award, from Fraunhofer Gesellschaft, Leonrodstrasse 54, D 80636 München, Germany | 2002 |
| 11. | Fraunhofer Research Scientist Fellowship | 2001-2004 |
| 12. | Senior Research Fellow, UGC, India | 1998-2000 |
| 13. | Junior Research Fellow, UGC, New Delhi, India | 1995-1997 |
| 14. | Graduate Aptitude Test in Engineering (GATE'93) with 94.12 percentile. Conducted jointly by Indian Institute of Technology (IIT) and Indian Institute of Science (IISc) | 1993 |

| Position | Programme | Duration | Institution |
|-----------------|--|---|---------------------------------|
| Organizer | International (Indo-Poland) Workshop on Functional Materials for Sensor and Energy Applications (FMSEA) | 10-11 th November 2022 | Alagappa University, Karaikudi. |
| Organizer | International Conference Nanomaterials Driven Advances in Chemical and BioSensors | 23 rd – 25 th March 2022 | Alagappa University, Karaikudi. |
| Organizer | National Workshop on Advanced Nanomaterials for Sustainable Energy and Sensors Applications | 04-06 th March 2020 | Alagappa University, Karaikudi. |
| Organizer | International Conference Nanomaterials Driven Advances in Chemical and BioSensors | 27-29 th November 2019 | Alagappa University, Karaikudi |
| Organizer | Workshop on Nano-Bio-Sensors: Present Status and Future Perspectives | 08-09 th March 2018 | Alagappa University, Karaikudi |
| Organizer | Workshop on Biosensors in Agricultural, Environmental and Medical Sciences | 13 th March 2017 | Alagappa University, Karaikudi |
| Organizer | Conference on Exploring Commercialization of Biosensors | 14 th March 2017 | Alagappa University, Karaikudi |
| Organizer | National Conference on Recent Advances in Nanomaterials for Sensor Applications | 06-07 th March 2014 | Alagappa University, Karaikudi |
| Organizer | National Conference on Recent Advances in Nanomaterials for Sensor Applications | 08-09 th March 2012 | Alagappa University, Karaikudi |
| Organizer | National Conference on Recent Advances in in Biosensors | 03-04 th March, 2011 | Alagappa University, Karaikudi |
| Organizer | National Seminar on Frontiers in Nanomaterials and Biosensors | 4 th & 5 th March, 2010, | Alagappa University, Karaikudi |
| Organizer | National Seminar on Advancements in Bioelectronics and Biosensors, | 19 th & 20 th March, 2009 | Alagappa University, Karaikudi |
| Organizer | one day workshop on Metrohm Autolab Electrochemical Instruments for biosensor, energy and corrosion applications | 16-02-2015 | Alagappa University, Karaikudi |

Other Training Programs

- Interdisciplinary course on Nanoscience and Technology, organized by University of Madras from 11.11.2009 to 01.12.2009.
- Orientation course in organized by Madurai Kamaraj University, from 30.05.2013 to 26.06.2013.
- Interdisciplinary course in Life sciences, organized by Bharathidasan University, Trichy, 03.03.2016 to 23.03.2016.

Overseas Exposure / Visits

| S.NO | Country visited | Position | Period |
|------|--|---|---|
| 1 | South Korea, Department of Chemistry, Biotech Center, Pohang University of Science and Technology, | Postdoctoral Research – Development of label free DNA sensing by electrochemical methods (Immunosensors for estrogen detection) | August 2007 – June 2008, Dec. 2004- Oct. 2006 Oct. 2012 - May 2013 |
| 2 | Japan, Diamond Research Centre, Advanced Institute of Industrial Science and Technology, Tsukuba | Research Scientist Staff – Diamond electrode-based DNA sensors. | October 2006 – March 2007 |
| 3 | Germany, Department of Biotechnical Micro systems, Fraunhofer Institute of Silicon Technology, | Postdoctoral Research Scientist worked on label free DNA sensing | Sept.2001- Nov.2004 |
| 4 | Taiwan, National Tai Chung University, Taisung | Research Exchange Visit Electrochemical Sensors development | September 2000 to December 2000 |

| S.No | Membership/ Society | Year |
|--|---|-------------|
| Membership in Professional Bodies | | |
| 1 | Life Member: Indian Science Congress, L 14698, | 2009 |
| 2 | Life Member: Nanoscience and Technology Society of India, South chapter, NN105, | 2015 |
| 3 | Regular Member: American Chemical society (ACS), USA | 2016 |
| 4 | Member, Biosensor Society, India | 2018 |
| 5 | Life member: Indian Society for Electroanalytical Chemistry (ISEAC) LM-321, | 2022 |
| 6 | Active Member, The Society for Advancement of Electrochemical Science and Technology, Karaikudi, A1369, | 1996 |

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

1. Board of studies – M.Sc., Bioelectronics and Biosensor – Member - 2008
2. Board of studies – M.Sc., Bioelectronics - Member - 2013
3. Board of studies – M.Sc., Physics (Specialization in Biosensors) - Member - 2016
4. Board of studies – B.Sc., Electronics - Chairman 2021
5. Board of studies – M.Sc., Electronics - Member 2021
6. Ph.D., Doctoral Committee – Member - 2009

Recent Publications

| SN0 | Title of the paper, with Journal's name, Year of Publication, Vol. No., Page Nos., etc. | Impact Factor, if any* |
|-----|--|------------------------|
| 1 | Yesurajan Allwin Richard, Sebastinbaskar Aniu Lincy, Shakkthivel Piraman and Venkataraman Dharuman , Ca-MOF-Polymer Modified Thin-Film Electrode for Detection of Toxic Cadmium (Cd ²⁺) in Biofluid and Environmental Fluid, <i>Electrochem. Soc.</i> 171, 027517. | 3.9 |
| 2 | S Elakkiya, V. Sudha, G Sathya Priyadarshini, G Selvi, V. Dharuman Tripodal Schiff base Tris [4-(4-nitrophenyl)-3-aza-3-butenyl] amine nanorod for selective detection of uric acid, <i>Inorganic Chemistry Communications</i> , 156, 2023, 111235. | 3.8 |
| 3 | V. Sudha, V. Duraisamy, N. Arumugam, A. I. Almansour, T. Xiaoteng Liu, V. Dharuman , S.M. Senthil Kumar <u>Ultrasensitive Dopamine Detection at Co₃O₄-Anchored N-Doped Hollow Mesoporous Carbon Nanospheres</u> , <i>ACS Applied Nano Materials</i> , 6(14), 2023, 13013-13026. | 5.9 |
| 4 | H. Imran, J. An, K. Jang, A. Alam, V. Dharuman , M. Ko, S. Lim, Highly selective and real-time detection of 5-hydroxymethylcytosine in genomic DNA using a carbon nitride-modified gold transducer-based electrochemical sensor, <i>Journal of Alloys and Compounds</i>, 948,2023, 169715 | 6.2 |
| 5 | Y. Allwin Richard, S. Aniu Lincy, P.Shakkthivel, V. Dharuman , Label-free electrochemical detection of cancer biomarkers DNA and anti-p53 at tin oxide quantum dot-gold-DNA nanoparticle modified electrode, <i>Bioelectrochemistry</i>, 150, 2023,108371 | 5.0 |
| 6 | V. Duraisamy, V. Sudha, V. Dharuman , S. Murugesan, S. Kumar, Highly Efficient Electrochemical Sensing of Acetaminophen by Cobalt Oxide-Embedded Nitrogen-Doped Hollow Carbon Spheres, <i>ACS Biomaterials Science & Engineering</i>, 2023 | 5.8 |
| 7 | Y. Allwin Richard, S. Aniu Lincy, Ramachandran Saravanakumar, R. Maheswaran, V. Dharuman , Sensitive detection of acetaminophen in body fluids, pharmaceuticals and herbal medicines at un-doped mesoporous carbon nitride film electrode, <i>Microchemical Journal</i>, 184, 2023, 108175 | 4.8 |
| 8 | S. Aniu Lincy, Y. Allwin Richard, T. Vinitha, K. Balamurugan, V. Dharuman , Streptavidin Fe ₂ O ₃ -gold nanoparticles functionalized theragnostic liposome for antibiotic resistant bacteria and biotin sensing, <i>Biosensors and Bioelectronics</i>,219, 2023, 114849 | 12.6 |
| 9 | H. Imran, A. Alam, V. Dharuman , S. Lim, Fabrication of Enzyme-Free and Rapid Electrochemical Detection of Glucose Sensor Based on ZnO Rod and Ru Doped Carbon Nitride Modified Gold Transducer, <i>Nanomaterials</i>, 12(10), 2022, 1778. | 5.3 |
| 10 | S. Aniu Lincy, V. Dharuman , P. Kumar Ultrasensitive and direct detection of DNA and whole E. coli cell at cholesterol gold nanoparticle composite film electrode, <i>Ionics</i>, 28(4), 2022, 1973-1983. | 2.8 |
| 11 | Y. Allwin Richard, V. Dharuman , Electrochemical ultrasensitive label free Escherichia Coli DNA detection at Gold decorated tungsten oxide nanoparticles modified electrode surface <i>J. Electrochemical Society</i>, 2021, | 3.9 |
| 12 | A. Anancia Grace , V. Dharuman, J. H. Hahn , GdTiO ₃ perovskite modified graphene composite for electrochemical simultaneous sensing of Acetaminophen and Dopamine. <i>J. Alloys and Compounds</i> , 886 (2021) 161256 | 6.2 |
| 13 | K. P. Divya , V. Dharuman, Electrochemical label free sensing of human IgG - Protein A interaction , <i>J. Food Chemistry</i> 339 (2021) 127991339, (2021), 127881 | 8.8 |
| 14 | Habibulla Imran, Venkataraman Dharuman Highly selective and rapid non-enzymatic glucose sensing at ultrathin layered Nb doped C3N4 for extended linearity range, <i>Microchemical Journal</i> 160 (2021) 105774 | 4.8 |
| 15 | S. Sivasakthi, H. Imran, G. Karuppasamy, S. Sagadevan, F.Mohammad, V. Dharuman , Green synthesis of porous carbon nanocubes accumulated microspheres for the | 4.4 |

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| | simultaneous non-enzymatic sensing of uric acid and dopamine in the presence of ascorbic acid, Synthetic Metals 270 , (2020), 116598 | |
| 16 | A. Anancia Grace, S. Thillaiarasi, V. Dharuman Binary Metal oxide Adsorbed Graphene modified Glassy carbon electrode for Detection of riboflavin , <i>Electroanalysis</i> , 33 (2021) 993-1006 | 3.223 |
| 17 | DM Kandhasamy, C Selvaraju, V Dharuman , Structure and Dynamics of Poly(methacrylic acid) and Its Interpolymer Complex Probed by Covalently Bound Rhodamine-123, <i>Spectrochimica Acta</i> , 248 (2020), 119166 | 4.4 |
| 18 | H. Imran, K. Vaishali, S. Antony Francy , P. N. Manikandan , V. Dharuman Platinum and zinc oxide modified carbon nitride electrode as non-enzymatic highly selective and reusable electrochemical diabetic sensor in human blood, Bioelectrochemistry 137 (2021) 107645 | 5.0 |
| 19 | G. Vijayaprasath, H. Imran, V. Dharuman , S. Balasubramanian, R. Ganesan Fabrication of Gd ₂ O ₃ Nanosheet-Modified Glassy Carbon Electrode for Nonenzymatic Highly Selective Electrochemical Detection of Vitamin B ₂ ACS Omega 2020 , 5 , 17892–17899 | 4.1 |
| 20 | K. P. Divya, R. Karthikeyan, B. Sinduja, A. Anancia Grace, S. Abraham John, J. H. Hahn, V. Dharuman , Carbon dots stabilized silver–lipid nano hybrids for sensitive label free DNA detection, Biosensors and Bioelectronics , 133, (2019) 48-54. | 12.6 |
| 21 | P. N. Manikandan, H. Imran, V. Dharuman , Self-powered polymer metal oxide hybrid solar cell for non-enzymatic potentiometric sensing of bilirubin, (Medical Devices & Sensors , (2019) e10031. | |
| 22 | H. Imran, P. N. Mainkandan, D. Prabhu, V. Dharuman , J. Jeyakanthan, Ultra selective label free electrochemical detection of cancer prognostic p53-antibody at DNA functionalized graphene, Sensing and Bio-Sensing Research , 23 , (2019) 100261 . | 5.3 |
| 23 | A. J. Anancia Grace, K. P. Divya, V. Dharuman , J. H. Hahn, Single step sol-gel synthesized Mn ₂ O ₃ -TiO ₂ decorated graphene for the rapid and selective ultra sensitive electrochemical sensing of dopamine, Electrochimica Acta , 302, (2019) 291-300 | 6.6 |
| 24 | H. Imran, P. N. Manikandan, V. Dharuman , Ultra-sensitive and selective label free electrochemical DNA detection at layer-by-layer self-assembled graphene oxide and vesicle liposome nano-architecture, Journal of Electroanalytical Chemistry 835, (2019) 10-21. | 4.4 |
| 25 | K.P. Divya, A.J. Anancia Grace, V. Dharuman , Rapid and sensitive electrochemical label free ion channel, membrane protein and DNA sensing on surface supported liposome-gold nanoparticle platform, Journal of Electroanalytical Chemistry 834, (2019) 56-63. | 4.4 |
| 26 | K. Jayakumar, M. B. Camarada, R. Rajesh, R. Venkatesan, H. Ju, V. Dharuman , Y. Wen, Layer-by-layer assembled gold nanoparticles/lower-generation (Gn≤3) polyamidoamine dendrimers-grafted reduced graphene oxide nanohybrids with 3D fractal architecture for fast, ultra-trace, and label-free electrochemical gene nano biosensors,) Biosensors and Bioelectronics 120 , (201855-63. | 12.6 |
| 27 | A. Subastri, V. Arun, P. Sharma, A. Suyavaran, S. Nithyananthan, G. M. Alshammari, B. Aristatile, V. Dharuman , C. Thirunavukkarasu, Synthesis and characterisation of arsenic nanoparticles and its interaction with DNA and cytotoxic potential on breast cancer cells Chemico-Biological Interactions 295 , , (2018) 73-83 . | 5.1 |
| 28 | A Amali Roselin, N Anandhan, V Dharuman , Deposition of transistion metal Mn doped BTO thin films by sol–gel technique, Journal of Materials Science: Materials in Electronics , 29 , (2018) 12036-12044 . | 2.8 |
| 29 | V. Govindan, H. Imran, V. Dharuman , K Sankaranarayanan, Microwave assisted synthesis of Ce-doped SnS ₂ nano-flowers with enhanced vitamin-B sensing and photocatalytic activity, Journal of Materials Science: Materials in Electronics 29 , (2018) 17670-17680 | 2.8 |
| 30 | K. Jayakumar, M. B. Camarada, V. Dharuman , R. Rajesh, R. Venkatesan, H. Ju, M. | 9.5 |

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| | Maniraj, A. Rai, S. R. Barman, Y. Wen, Layer-by-Layer-Assembled AuNPs-Decorated First-Generation Poly(amidoamine) Dendrimer with Reduced Graphene Oxide Core as Highly Sensitive Biosensing Platform with Controllable 3D Nanoarchitecture for Rapid Voltammetric Analysis of Ultrace DNA Hybridization, ACS Appl. Mater. Interfaces , 10 , (2018) 21541–21555. | |
| 31 | H. Imran, P. N. Manikandan, V. Dharuman , Graphene oxide supported liposomes for efficient label free electrochemical DNA biosensing, Sensors and Actuators B: Chemical 260 , (2018) 841-851. | 8.4 |
| 32 | K. Jayakumar, M. B. Camarada, V. Dharuman , H. Ju, R. S. Dey, Y. Wen, One-step electrodeposition-assisted layer-by-layer assembly of gold nanoparticles and reduced graphene oxide and its self-healing three-dimensional nanohybrid for an ultrasensitive DNA sensor, Nanoscale , 10 , (2018) 2658-2658. | 6.7 |
| 33 | E Preedia Babu, A Subastri, A Suyavaran, K Premkumar, V Sujatha, B Aristatile, Ghedeir M Alshammari, V Dharuman , C Thirunavukkarasu, Size Dependent Uptake and Hemolytic Effect of Zinc Oxide Nanoparticles on Erythrocytes and Biomedical Potential of ZnO-Ferulic acid Conjugates, , Scientific Reports 7 . (2017)908 | 4.6 |
| 34 | K. P. Divya, V. Dharuman , Supported binary liposome vesicle-gold nanoparticle for enhanced label free DNA and protein sensing, Biosensors and Bioelectronics , 95 , (2017), 168-173. | 12.6 |
| 35 | P. N. Manikandan, V. Dharuman , Electrochemical Simultaneous Sensing of Melatonin, Dopamine and Acetaminophen at Platinum Doped and Decorated Alpha Iron Oxide Electroanalysis 29 , (2017) 1 – 9. | 3.223 |
| 36 | K. P. Ganesan, N. Anandhan, V. Dharuman , P. Sami, R. Panneerselvam, T. Marimuthu Electrochemically modified crystal orientation, surface morphology and optical properties using CTAB on Cu2O thin films, Results in Physics , 7 , (2017)82. | 5.3 |
| 37 | P. N. Manikandan, H. Imran, V. Dharuman , Direct glucose sensing and biocompatible properties of zinc oxide- multiwalled carbon nanotube - poly (vinyl chloride) ternary composite Anal. Methods , 8 , (2016), 2691-2697. | 3.1 |
| 38 | M. Bhuvana, V. Dharuman Inchain lengths and head groups on tethering of liposome-gold nanoparticle on gold surface for electrochemical DNA sensing and gene delivery Sensors and Actuators B: Chemica , 223 , (2016) 157–165. | 8.4 |
| 39 | H. Imran, P. N. Manikandan, V. Dharuman Facile and green synthesis of graphene oxide by electrical exfoliation of pencil graphite and gold nanoparticle for non-enzymatic simultaneous sensing of ascorbic acid, dopamine and uric acid RSC Advances , 5 (2015) 63513-63520. | 3.9 |
| 40 | V. Dharuman , C. Anjalidevi, P. N. Manikandan , H. Imran, Gold nanoparticles supported on zirconium, tin and ruthenium oxides for reagentless electrochemical sensing of hydrogen peroxide Anal. Methods , 7 , (2015) 3454-3460. | 3.1 |
| 41 | G. Vijayaprasath, R. Murugan, J. Shankara Narayanan, V. Dharuman , G. Ravi, Y. Hayakawa, Glucose sensing behavior of cobalt doped ZnO nanoparticles synthesized by co-precipitation method Journal of Materials Science: Materials in Electronics 7 , (2015) 4446-4450. | 2.8 |
| 42 | M. Bhuvana, V. Dharuman , Construction of Spherical Liposome on Solid Transducers for Electro chemical DNA Sensing and Transfection Appl Biochem Biotechnol 174 , (2014), 1137-1150. | 3.0 |
| 43 | M. Bhuvana, V. Dharuman , Tethering of spherical DOTAP liposome gold nanoparticles on cysteamine monolayer for sensitive label free electrochemical detection of DNA and transfection, Analyst 139 , (2014) 2467-2475. | 4.2 |
| 44 | J. Shankara Narayanan, M. Bhuvana, V. Dharuman , Sandwiching spherical 1, 2-dioleoyltrimethyl ammoniumpropane liposome in gold nano particle on solid transducer for electrochemical ultrasensitive DNA detection and transfection Biosensors and Bioelectronics , 58 , (2014), 326-332. | 12.6 |
| 45 | S. Radhakrishnan, C. Sumathi, Ahmad Umar, Sang Jae Kim, J. Wilson, V. Dharuman , Polypyrrole– poly(3,4-ethylenedioxythiophene)–Ag (PPy–PEDOT–Ag) nanocomposite | 12.6 |

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| | films for label-free electrochemical DNA sensing Biosensors and Bioelectronics , 47 , (2013) 133-140. | |
| 46 | V. Dharuman, J. H. Hahn, K. Jayakumar and W. Teng, Electrochemically reduced graphene-gold nano particle composite on indium tin oxide for label free immuno sensing of estradiol Electrochimica Acta , 114 , (2013) 590– 597. | 6.6 |
| 47 | C. Anjalidevi, V. Dharuman, J. Shankara Narayanan, Non enzymatic hydrogen peroxide detection at Ruthenium oxide-gold nano particle- Nafion modified electrode (2013) Sensors and Actuators B Chemical 182, 256– 263. | 8.4 |
| 48 | S. Radhakrishnan, C. Sumathi, V. Dharuman, J. Wilson, Polypyrrole nanotubes– polyaniline composite for DNA detection using methylene blue as intercalator, Analytical Methods , 5 , (2013) 1010-1015. | 3.1 |
| 49 | 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 , (2013) 684-689. | 3.1 |
| 50 | J. Shankara Narayanan, C. Anjalidevi, V. Dharuman, Nonenzymatic glucose sensing at ruthenium dioxide–poly(vinyl chloride)–Nafion composite electrode Journal of Solid State Electrochemistry 17 , (2013) 937–947. | 2.5 |
| 51 | M. Bhuvana, J. Shankara Naryanan, V. Dharuman, W. Teng, J. H. Hahn, K. Jayakumar, Gold Surface Supported Spherical Liposome – Gold Nano Particle Nano Composite for Label Free DNA Sensing, Biosensors and Bioelectronics 41 , (2013) 802–808. | 12.6 |
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Contribution in book chapters

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| 1. | Fully Electrical Microarrays', in Perspectives in Bioanalysis, | R. Hintsche, B. Eisholz, G. Piechotta, R. Woerl, C. G. J. Schabmueller, J. Albers, V. Dharuman , E. Nebling, A. Hanisch, L. Blohm, F. Hofmann, B. Holzapfl, A. Frey, C. Paulus, M. Schienle, R. Thewas, | Ed.Paesche, Palecek, Elsevier, 246-277, ISBN: 978-0-444-52223-8 | 2006 |
| 2. | Label free Electrochemical sensing of DNA hybridization for Cancer Analysis" in Biosensors and Molecular Technologies for Cancer Diagnostics, Keith | V. Dharuman , J. H. Hahn | E. Herold, Avraham Rasooly CRC press, Taylor & Francis Group. 671-692 | 2012 |
| 3. | Graphene -PAMAM Dendrimer - Gold nano particle composite for electrochemical DNA hybridization Detection", | K. Jayakumar, R. Rajesh, V. Dharuman , R. Venkatesan, | Nucleic Acid detection Methods and Protocols, Ed. Dimitry M. Kolpashchikov and Yulia V. Gerasimova, Humana Press, USA, PP 201-220, ISBN, 978-1-62703-534-7 | 2013 |
| 4 | "Carbon Nanodots Based Electrodes in Biomolecular Screening and Analysis' | V. Dharuman | Handbook of Nanobioelectrochemistry, Springer, Singapore | 2023 |

Resource persons in various capacities

Conferences /invited lectures/papers presented

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| Number of Invited | : 33 |
| Special Lectures delivered | : 33 |
| Papers presented | : 72 |

| S.No | Title of the Invited Lecture/Paper presented | Title of Conference/ Seminar date etc. | Organized by |
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| 1 | Quantum dot based biosensing | ACT NExT, 29.02.2024 | Dept of Industrial Chemistry, Alagappa University, Karaikudi |
| 2 | Electrochemical detection of DNA biomarker at modified electrodes | International Conference on Electrochemistry for Industry, Health and Environment (EIHE-2024), 08– 10 th , February, 2024 | CO2 Research and Green Technologies Centre, Vellore Institute of Technology, Vellore-632 014, India |
| 3 | Streptavidin Fe ₂ O ₃ -gold nanoparticles Functionalized theranostic liposome for Antibiotic Resistant Bacteria and Biotin sensing | International conference on electrochemistry in industry, Health and Environment, 7 th to 11 th February, 2023 | BARC, Mumbai |
| 4 | Lipids on graphene nano structures and DNA sensing | International online Conference on Nano materials (ICN-2021), 09 th -11 th April 2021 | Mahatma Gandhi University, P.D Hills P.O, Kottayam, Kerala, India & Wroclaw University of Technology, Wroclaw, Poland & Gdansk University of technology, Poland & Wuhan University, China |
| 5 | Nanomaterials for Biosensing | One-day seminar, CHEM-FEST, 18.03.2022 | Sacred Heart College, Thiruppattur |
| 6 | Neuro Biosensing at Metal Oxide modified Carbon transducers | 6 th International Conference on Recent Advances in Material Chemistry (ICRAMC-2022), 17 th -19 th February 2022 | Department of Chemistry, SRM Institute of Science and Technology |
| 7 | Recent advances in Biosensor | Short term training course on Recent trends in thin film development and their applications in biomedical and biosensor devices, 28 th March 2018 | Nanoscience and nanotechnology at Sathiyabama Institute of Science and Technology, Chennai |
| 8 | Molecular sensing signal amplification strategies for point of care development for early disease diagnosis | Emerging Materials for Diagnostic and Therapeutic” (EMDT-2022), 27 th and 28 th January, 2022 | Center for Nanoscience and Nanotechnology, Sathiyabama Institute of Science and Technology, Chennai. |
| 9 | Liposome platforms for electrochemical Biosensing | International Conference on Electrochemistry for Industry, Health and Environment, 21-25, January 2020 | BARC, ISEAC Mumbai |
| 10 | Spherical liposomes and metal nanoparticles in Biosensing | International conference on advances in chemistry with Specific reference to catalysis, sensors, drug delivery and Energy materials, 9-10, January 2020 | University of Madras |
| 11 | Spherical liposomes and metal nanoparticles in | Nano/Biotechnology 2019, 19 th to 21 th December, 2019 | Jawaharlal Nehru University, New Delhi |

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| | biosensor | | |
| 12 | Recent advancements in diabetics and DNA sensing | National Workshop on Emerging Sensor Technologies, 7th – 8th January 2019 | Bharathiar University |
| 13 | Label free DNA sensing Signal Amplification strategies for tools development for early disease diagnosis | Biomarkers from research to commercialization, May, 24-25, 2018 | Select bio Bangalore |
| 14 | Advances in Biosensor | International symposium on crystallography and advanced materials, 26 & 27th March 2018 | Organized by University of Madras, Chennai |
| 15 | Anchoring of lipid gold nanoparticle on gold transducer applications | International conference on recent trends in Analytical Chemistry, 15-17, March 2018 | organized by University of Madras, Chennai |
| 16 | Biosensors and applications | One day seminar on recent developments in DNA barcoding RET species of peninsular India, 3 rd August 2017 | Alagappa University |
| 17 | A session Chaired | Two day international conference on Renewable energy science and technology (ICREST-2017), 10 & 11 th March 2017 | Alagappa University, |
| 18 | Recent Advances in Biosensing Resource person | sponsored short term training course on Recent trends in thin film development and their applications in biomedical and biosensor devices, 12th to 28th March, 2018 | organized by Sathyabama Institute of Science and Technology, Chennai |
| 19 | Biosensors and their applications | One day National seminar on Modern Trends in Chemistry – 2018, 21st, February 2018 | S, Vellaichamy Nadar College, Madurai, |
| 20 | Assembling liposome – gold nanoparticles on solid surfaces for enhanced DNA sensing | Euro-India International conference on experimental and clinical medicine (ICECM-2017), Nov. 10-12, 2017 | Organized by International and Inter University centre for Nanoscience and Nanotechnology, Mahatma Gandhi University, Kerala. |
| 21 | A session Chaired | Euro-India International conference on experimental and clinical medicine (ICECM-2017), Nov. 10-12, 2017 | Organized by International and Inter University centre for Nanoscience and Nanotechnology, Mahatma Gandhi University, Kerala. |
| 22 | Interfacing material nanostructures with | National Conference on Futuristic Materials (NCFM- | Alagappa University, Karaikudi |

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| | molecules for sensing | 2017), March 27 & 28th, 2017 | |
| 23 | Electrochemical DNA sensing on graphene oxide – gold nanoparticle transducer | Recent Advances in Chemistry, Aug 13-14, 2015 | Department of Chemistry, Kandaswami Kandar's College, Velur |
| 24 | Anchoring of Lipid-Gold Nanoparticles on Gold Transducers for Sensing Applications, BiTERM-2015, | Biomaterials Tissue Engineering, Drug Delivery System & Regenerative Medicine, 5-7th February 2015 | Anna University, Chennai |
| 25 | Electrochemical biosensing | Faculty Development programme on Frontiers Research in Applied Sciences (FRAS 15), 3-16, June 2015 | Anna University Bharathidasan Institute of Technology, Trichy |
| 26 | Behaviour of liposome-gold nanoparticle complex on solid transducer- Electrochemical studies | International conference on Nanostructured Materials and Nanocomposites (ICNM 2014), 19-21 December, 2014 | Mahatma Gandhi University, Kerala |
| 27 | Designing And Characterization Of Transducers For Electrochemical Dna Sensing | Recent Advances in Nanomaterials for Sensor Applications (NANOSE-2014), 6-7, March 2014 | Alagappa University, Karaikudi |
| 28 | Electrochemical DNA sensing in presence of inorganic metal complexes and organic dyes | Indo-French Seminar on Bio-inorganic approaches to current health problems, 24-28 March 2014 | Pondicherry University and Indo French center for promotion of Advanced research |
| 29 | Construction of Spherical Liposome on solid transducers for electrochemical DNA Sensing and transfection | Indo-Japan workshop on Biomolecular Electronics & Organic Nanotechnology for Environment Preservation (IJWBME 2013), 13 -15 December 2013 | Delhi Technological University, Delhi, India |
| 30 | Surface Designing Transducers and Characterization for Efficient and Reliable Label Free Electrochemical DNA Hybridization Sensing | International conferences on Emerging Trends in Chemical Sciences (IETC 2013), 5-7 December 2013 | Vellore Institute of Technology, Vellore |
| 31 | DNA sensing on graphene transducers | National Conference on Recent Advancements in Nanomaterials for Sensor Applications (NANOSE-12), 8-9 March 2012 | Alagappa University, karaikudi |
| 32 | Label free Electrochemical Sensing of DNA Hybridization on Gold Transducers | Biomaterials Implant devices and Tissue Engineering BIDTE-2012, 6-8 January 2012 | Rajalakshmi Institutions, Chennai |
| 33 | Enzyme label free electrochemical DNA hybridization detection at Ternary layers | International Symposium Cum workshop on Electrochemistry, 7-10, December 2011 | Indian Society for Electroanalytical Chemistry BARC, Mumbai, India |
| 34 | Evolution of Microarrays in Biotechnological Research – Overview | Current trends in Genomics and Proteomics-2011 | Pondicherry University |

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| 37 | Electronic DNA microarrays in Biomedical Sciences | Biomedical applications of Nanotechnology -2011, 11-12, Aug. 2011 | Rajalaksmi Engineering College, Chennai |
| 38 | Amperometry and Differential Pulse Voltammetry Basics | National workshop on Electrochemical Techniques, 11-13 October 2010 | Alagappa University |
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| 40 | Efficient and Reliable electrochemical DNA sensing based on ternary monolayers pattern | National conference on nanoscience and nanotechnology, 25-27, August 2011 | National centre for Nanoscience and nanotechnology, University of Madras |
| 41 | Overview of gold thiol selfassembled monolayer approach | National conference on Nanotechnology: Current Approaches and Applications (Environ Nano-2010), 5-6, February, 2010 | Manonmaniam Sundranar University |
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| 46 | Miniaturization of biomolecular sensing analytical devices - Perspectives and Challenges | Perspectives in Nano Science and Nanobiotechnology-2009, 4-5, March 2009 | Karunya University, Coimbatore |
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| 50 | Electrochemical DNA Hybridization Sensing on gold surfaces | National conference on Nanobiotechnology, (Genomera, -2008), 24-25 July 2008 | Periyar Maniyammai University |
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| 59 | Development of Mn ₂ O ₃ – TiO ₂ -Graphene nanostructured electrods for selective sensing of dopamine | International Conference On Nanomedicine (Icon-2019), Febraury 25-26, 2019 | Madurai Kamaraj University, Madurai-21 |

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