

G. JAYANTHI KALAIVANI

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Educational Background:

B.Sc., CHEMISTRY – Lady Doak College, Madurai

M.Sc., CHEMISTRY – The American College, Madurai

M.Phil., CHEMISTRY – Madurai Kamaraj University, Madurai

Teaching Experience: 15 years

Research Experience: 2013-2019

Research Interests: Electrochemical Biosensors

Total Number of Publications: 11; Total Citations - 92

List of recent publications and chapters in books: (Past 5 years details- 2015-2019)

1. **G. Jayanthi Kalaivani & S.K.Suja**, Cholesterol oxidase immobilized inulin based nanocomposite as the sensing material for cholesterol in biological and food samples, Enzyme and Microbial Technology, 2020, 140, 109631. [Elsevier Publication; IF – 3.493]
2. **G. Jayanthi Kalaivani & S.K.Suja**, Nanomolar level sensing of glucose in food samples using glucose oxidase confined MWCNT-Inulin-TiO₂ bio-nanocomposite, Food Chemistry, 2019, 298, 124981. [Elsevier Publication; IF – 7.514]
3. **G. Jayanthi Kalaivani & S.K. Suja**, Enzyme-less sensing of the kidney dysfunction biomarker creatinine using an inulin based bio-nanocomposite, New Journal of Chemistry, 43, 2019, 5914-5924. [RSC Publication' IF -3.591].
4. **G. Jayanthi Kalaivani & S.K. Suja**, Electroenzymatic sensing of urea using CP/MWCNT-inulin-TiO₂ Bioelectrode, Applied Surface Science, 449, 2018. [Elsevier publication' IF – 6.707].

5. S.K. Suja, K. Yazhini, **G. Jayanthi Kalaivani**, J. Bagyalakshmi & S. Pavalamalar, Non-enzymatic sensing of kidney dysfunction biomarker using pectin – MWCNT nanocomposite, *Applied Surface Science*, 449, 2018, 736 -744. [Elsevier publication' IF – 6.707].
6. **G. Jayanthi Kalaivani** & S.K. Suja, TiO₂(rutile) embedded inulin—A versatile bio-nanocomposite for photocatalytic degradation of methylene blue, 143, *Carbohydrate Polymers*, 2016, 51–60. [Elsevier publication' IF – 9.381].
7. **Shruti Suriyakumar, Beulah J M Rajkumar, G. Jayanthi Kalaivani**, Fabrication of low cost soil moisture sensor for irrigation water management, **International Journal of Advanced Research**, 2 (8), 2014, 560-571. ISSN: 2320-5407. [IF: 7.337].
8. E.Jackcina Stobel Christy, J.Jasmin Glory Kiruba, K.Suganya, S.Pavala Madhumitha S.K.Suja, **G. Jayanthi Kalaivani** “Extraction of pectin from fruit wastes- an effective method of municipal solid waste management”, **International Journal of Advanced Research**, 2, 2014, 936-944. ISSN: 2320-5407. [IF: 7.337].

CHAPTER IN BOOK

1. S.K. Suja, **G. Jayanthi Kalaivani**, **Macromolecular Enzymes Triggered Electrochemical Biosensing**, *Foundation and Growth of Macromolecular Science: Advances in Research for Sustainable Development*, **Apple Academic Press** 2022 (Under Publication)
2. S.K. Suja, **G. Jayanthi Kalaivani**, **Carbohydrate Polymer-Nanocomposites as Cholesterol Sensors**, *Polymer Blends, Composites and Bio-Nanocomposites*, **Apple Academic Press**, 2022 (Under Publication)
3. S.K. Suja, **G. Jayanthi Kalaivani**, **CNT-Based Bio-Nanocomposite as Electrochemical Sensors**, *Advances in Nanostructured Composites* Mahmood Aliofkhazraei (Editor) **CRC Press**; 1st Edition, (2019) ISBN-13: 978-1482236637.

Details about Funded Research Projects: -

International & National Sponsored Programs: (sponsored programs attended for Academic/ Research purpose)

1. **“Electrokinetic efficiency of Cholesterol Oxidase loaded MWCNT-Inulin-TiO₂ Bio-Nanocomposite in the sensing of Cardiovascular Biomarker- Cholesterol”** - Paper presented at the International conference organized by the Department of Physics and Nanotechnology, SRM University, Chennai, India, in association with Shizuoka University, Japan, GNS-New Zealand, ANNA-Japan, NCTU-Taiwan, Sponsored by DST-SERB and DRDO, Government of India and by various private industries from 28/01/2019 to 30/01/2019.
2. **“Electroenzymatic sensing of urea using CP/MWCNT-Inulin-TiO₂/Ur Bioelectrode”** - Paper presented at the International conference organized by the Department of Physics and Nanotechnology, SRM University, Chennai, India, in association with Shizuoka University, Japan, GNS-New Zealand, ANNA-Japan, NCTU-Taiwan, Sponsored by DST-SERB and DRDO, Government of India and by various private industries from 09/08/2017 to 11/08/2017.
3. **“A biocompatible CNT based bio-nanocomposite for glucose biosensing”** - Paper presented at the National Seminar organized by the Department of Industrial Chemistry, School of Chemical Sciences, Alagappa University, Karaikudi 6. 03.15 & 7.03.15.
4. **“A Journey of Technology from macro to micro to nano to...”** – Paper presented at the National seminar on Recent trends in Chemistry organized by Jayaraj Annapackiam College for women, Periyakulam on 27th & 28th Sep, 2006.

Outstanding achievements / awards / honors:

Prof. A.S. Rajendran Prize for Best Student in Organic Chemistry in M.Sc. Chemistry. (2004)

Prof. P.S. Lakshmi Narayan Prize for Best Student in Chemistry in M.Sc. Chemistry. (2002)

Other responsibilities held in college:

- Coordinator, Centre for Life Frontier Engagement (2015-2016,2020-till date)
- Member, Satellite campus committee (2021- till date)
- Member, Prizes Committee (2020- till date)
- Convener, Library Service Programme (2016-2018)
- Convener, Prizes Committee (2014-2015)
- Convener, Amalchem Club (2005-2008, 2018-2021)
- Member, National Service Scheme (2004-2008)