

FACULTY PROFILE:



Name: Dr. M. Keerthi
Qualification: M.Sc., M.Phil., Ph.D.
Designation: Assistant Professor
Years of Experience: UG: 1 PG:0
Previous Experience: UG: 0 PG:0
Area of Specialization: (Organic Chemistry, Inorganic chemistry, Electrochemistry)
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WORKSHOPS

S.no.	Organized by	State/National/International	Topic	Date(s)
1	University of Madras, Chennai	State	Ion chromatography and its applications	13/08/2015
2	St. Joseph's College, Tiruchirappalli,	State	Modern methods of analytical techniques in chemistry research	31/01/2014

CONFERENCES ATTENDED / PRESENTED PAPER

S.no.	Organized by	State/National/International	Participated/ Presented	Title	Date(s)
1	National Taipei University of Technology, Taipei, Taiwan	International	Presented oral	* "Facile Hydrothermal Synthesis and Electrochemical Properties of Manganese dioxide@ graphitic Carbon Nitride Nanocomposite toward Highly Sensitive Detection of Nitrite" <i>International conference on sensors, materials, and manufacturing (ICSMM 2019)</i>	18/11/2019 - 20/11/2019
2	National Taipei University of Technology, Taipei, Taiwan	International	Presented oral	*"Graphene Oxide/ α -MnO ₂ Binary Nanosheets Based Non- Enzymatic Biosensor for Pico-Molar Level Electrochemical Detection of Biomarker	19/11/2018 - 22/11/2018

				(Guanine) in DNA Sample” <i>International conference on sensors, materials, and manufacturing (ICSMM 2018)</i>	
3	National Taipei University of Technology, Taipei, Taiwan	International	Presented oral	“One-pot biosynthesis of reduced graphene oxide/Prussian blue microcubes composite and its sensitive detection of prophylactic drug dimetridazole”, <i>International conference on advances in biology and chemistry (ICABC 2018)</i>	06/08/2018 - 08/08/2018
4	Department of Analytical Chemistry, University of Madras, Chennai.	International	Participated	International conference on recent trends in analytical chemistry	28/12/2015 - 30/12/2015

CERTIFICATE COURSES /VALUE ADDED COURSES

S.no.	Offered by	Topic	Duration
1	Anna University, Chennai.	The State of Art-Analytical Instruments	26/10/2015 - 30/10/2015

JOURNAL PUBLICATIONS

S.NO.	JOURNAL NAME	UGC /SCI/SCIE/ WOS	ISBN / ISSN NUMBER	REFERENCE	DATE OF PUBLICATION/D OI
1	Progress in Materials Science	UGC /SCI/SCIE/ WOS	0079-6425	Heterostructures of 2D materials and their applications in biosensing, Progress in Materials Science, Rajalakshmi Sakthivel, Murugan Keerthi , Ren-Jei Chung, Jr-Hau He, Volume 132, 2023, 101024	16 September 2022 https://doi.org/10.1016/j.pmatsci.2022.101024
2	Nanoscale	UGC /SCI/SCIE/ WOS	2040-3372	Angiopep-2-decorated titanium–alloy core–shell magnetic nanoparticles for nanotheranostics and medical imaging, Senthilkumar Thirumuruga	12 Sep 2022 https://doi.org/10.1016/j.colsurfb.2022.113033

				n, Pranjyan Dash, Xinrui Liu, Yuan-Yun Tseng, Wei-J hih Huang, Yunqian Li, Gang Zhao, Chingpo Lin, Keerthi Murugan , Udesh Dhawan, Ren-Jei Chung, 2022, Nanoscale Vol. 14. Issue 39, Pg 14789-14800. Royal Society of Chemistry.	
3	Colloids and Surfaces B: Biointerfaces	UGC /SCI/SCIE/ WOS	09277765	A non-enzymatic, biocompatible electrochemical sensor based on N-doped graphene quantum dot-incorporated SnS ₂ nanosheets for in situ monitoring of hydrogen peroxide in breast cancer cells, Colloids and Surfaces B: Biointerfaces , Asit Kumar Panda, Keerthi Murugan , Rajalakshmi Sakthivel, Lu-Yin Lin, Yeh-Fang Duann, Udesh Dhawan, Xinke Liu, Jr-Hau He, Ren-JeiChung, Volume 222,2023,113033	16 November 2022 https://doi.org/10.1016/j.colsurfb.2022.113033
4	Materials Today Chemistry	UGC /SCI/SCIE/ WOS	2468-5194	A biocompatible electrochemical sensor based on PtNi alloy nanoparticles-coupled N-GQDs for <i>in situ</i> monitoring of dopamine in glioma cells. A.K. Panda, Keerthi Murugan , R.Sakthivel, U.Dhawan, L.-Y.Lin, Y.-F.Duann, J.-H.He, R.-J.Chung, Materials Today Chemistry , <u>27</u> , 2023, 101283	7 October 2022 https://doi.org/10.1016/j.mtchem.2022.101283
5	Food Chemistry	UGC /SCI/SCIE/ WOS	0308-8146	M. Keerthi , A.K. Panda, Y.-H. Wang, X. Liu, J.-H. He, R.-J. Chung, Titanium Nanoparticle Anchored Functionalized MWCNTs for Electrochemical Detection of Ractopamine in Porcine Samples with Ultrahigh Sensitivity, <i>Food Chemistry</i> , (2022) 132083.	8/1/2022 https://doi.org/10.1016/j.foodchem.2022.132083

6	Colloids and Surfaces A: Physicochemical and Engineering Aspects	UGC /SCI/SCIE/ WOS	0927-7757	V. Mariyappan, S.-M. Chen, M. Keerthi , A. Jeevika, T. Jeyapragasam, R. Ramachandran, Electrochemical sensor based on cobalt ruthenium sulfide nanoparticles embedded on boron nitrogen co-doped reduced graphene oxide for the determination of nitrite, <i>Colloids and Surfaces A: Physicochemical and Engineering Aspects</i> , (2022) 128271.	1/6/2022 https://doi.org/10.1016/j.colsurfa.2022.128271
7	Nanomaterials	UGC /SCI/SCIE/ WOS	2079-4991	A.K. Panda, M. Keerthi , R. Sakthivel, U. Dhawan, X. Liu, R.-J. Chung, Biocompatible Electrochemical Sensor Based on Platinum-Nickel Alloy Nanoparticles for In Situ Monitoring of Hydrogen Sulfide in Breast Cancer Cells, <i>Nanomaterials</i> , 12(2022) 258.	14/1/2022 https://doi.org/10.3390/nano12020258
8	Nanomaterials	UGC /SCI/SCIE/ WOS	2079-4991	M.-T. Tsai, Y.-S. Sun, M. Keerthi , A.K. Panda, U. Dhawan, Y.-H. Chang, et al., Oral Cancer Theranostic Application of FeAu Bimetallic Nanoparticles Conjugated with MMP-1 Antibody, <i>Nanomaterials</i> , 12(2022) 61.	27/1/2022 https://doi.org/10.3390/nano12010061
9	Indian Journal of Chemical Technology	UGC /SCI/SCIE/ WOS	0975-0991	B. Gopal, M. Keerthi , S.-M. Chen, Electrocatalytic performance of the cobalt oxide nanoparticles decorated graphene oxide over the detection of folic acid, <i>Indian Journal of Chemical Technology</i> (2021)	1/9/2021 http://nopr.niscair.res.in/handle/123456789/58692
10	Journal of colloid and interface science	UGC /SCI/SCIE/ WOS	0021-9797	V. Mariyappan, M. Keerthi , S. M. Chen, T. Jeyapragasam, Nanostructured perovskite-type gadolinium orthoferrite decorated RGO nanocomposite for	15/10/2021 https://doi.org/10.1016/j.jcis.2021.05.035

				the detection of nitrofurantoin in human urine and river water samples, <i>Journal of colloid and interface science</i> , 600 (2021) 537-49	
11	Colloids and Surfaces A: Physicochemical and Engineering Aspects	UGC /SCI/SCIE/ WOS	0927-7757	N. Karuppusamy, V. Mariyappan, S. M. Chen, M. Keerthi , R. Ramachandran, A simple electrochemical sensor for quercetin detection based on cadmium telluride nanoparticle incorporated on boron, sulfur co-doped reduced graphene oxide composite, <i>Colloids and Surfaces A: Physicochemical and Engineering Aspects</i> , 626 (2021) 127094.	5/10/2021 https://doi.org/10.1016/j.colsurfa.2021.127094
12	Colloids and Surfaces A: Physicochemical and Engineering Aspects	UGC /SCI/SCIE/ WOS	0927-7757	R. Sundaresan, V. Mariyappan, S.M. Chen, M. Keerthi , R. Ramachandran, Electrochemical sensor for detection of tryptophan in the milk sample based on MnWO ₄ nanoplates encapsulated RGO nanocomposite, <i>Colloids and Surfaces A: Physicochemical and Engineering Aspects</i> . (2021) 625:126889.	20/9/2021 https://doi.org/10.1016/j.colsurfa.2021.126889
13	Journal of Electroanalytical Chemistry	UGC /SCI/SCIE/ WOS	1572-6657	V. Mariyappan, T. Jeyapragasam, S.M. Chen, M. Keerthi , Mo-WO nanowire intercalated graphene aerogel nanocomposite for the simultaneous determination of dopamine and tyrosine in human urine and blood serum sample, <i>Journal of Electroanalytical Chemistry</i> , 895(2021) 115391	8/15/2021 https://doi.org/10.1016/j.jelechem.2021.115391
14	Materials Chemistry and Physics	UGC /SCI/SCIE/ WOS	0254-0584	G. Boopathy, M. Keerthi , S.-M. Chen, S. Meenakshi, M. Umopathy, Molybdenum trioxide 27/1 embedded graphitic	1/9/2021 https://doi.org/10.1016/j.matchemphys.2021.124735

				carbon nitride sheets modified electrode for caffeine sensing in green tea and coffee powder, <i>Materials Chemistry and Physics</i> , 269 (2021) 124735.	
15	Materials Science and Engineering: C	UGC /SCI/SCIE/ WOS	0928-4931	X. Liu, W.-C. Liu, H.-Y. Wang, V.L. Li, Y.C. Chen, A.-N. Wang, M. Keerthi et al., Polyelectrolyte multilayer composite coating on 316 L stainless steel for controlled release of dual growth factors accelerating restoration of bone defects, <i>Materials Science and Engineering: C</i> , 126 (2021) 112187.	1/7/2021 https://doi.org/10.1016/j.msec.2021.112187
16	Journal of Agricultural and Food Chemistry	UGC /SCI/SCIE/ WOS	0021-8561	V. Mariyappan, M. Keerthi , S.-M. Chen, Highly selective electrochemical sensor based on gadolinium sulfide rod-embedded RGO for the sensing of carbofuran, <i>Journal of Agricultural and Food Chemistry</i> , 69 (2021) 2679-88.	1/3/2021 https://dx.doi.org/10.1021/acs.jafc.0c07522
17	Materials Chemistry and Physics	UGC /SCI/SCIE/ WOS	0254-0584	D.S.A. Selvan, M. Keerthi S. Murugesan, S. Shobana, B. Lakshmi, V. Veena, A.K. Rahiman, In vitro cytotoxicity efficacy of phytosynthesized Ag/ZnO nanocomposites using <i>Murraya koenigii</i> and <i>Zingiber officinale</i> extracts, <i>Materials Chemistry and Physics</i> , 272 (2021) 124903.	1/11/2021 https://doi.org/10.1016/j.matchemphys.2021.124903
18	Journal of Alloys and Compounds	UGC /SCI/SCIE/ WOS	0925-8388	V. Mariyappan, M. Keerthi , S.-M. Chen, Solvothermal synthesis of carbon incorporated MnS ₂ Spheres; high sensing performance towards the detection of furazolidone in bio-fluids, <i>Journal of Alloys and Compounds</i> , 882 (2021) 160744.	8/6/2021 https://doi.org/10.1016/j.jallcom.2021.160744

19	Surface and Coatings Technology	UGC /SCI/SCIE/ WOS	0257-8972	X. Liu, Y. Li, S. Li, Y.-C. Lin, V.L. Li, Y.-H. Chen, M. Keerthi et al., Polyelectrolyte multilayer coatings for short/long-term release of antibacterial agents, <i>Surface and Coatings Technology</i> , 393(2020) 125696.	15/7/2020 https://doi.org/10.1016/j.surfcoat.2020.125696
20	ACS Sustainable Chemistry & Engineering	UGC /SCI/SCIE/ WOS	2168-0485	Shanmugam, R.; Manavalan, S.; Chen, S.- M.; Keerthi , M.; Lin, L.-H. Methyl Parathion Detection Using SnS ₂ /N, S-Co-Doped Reduced Graphene Oxide Nanocomposite. <i>ACS Sustainable Chemistry & Engineering</i> 2020, 8 (30), 11194-11203.	13/7/2020 https://dx.doi.org/10.1021/acssuschemeng.0c02528
21	Journal of The Electrochemical Society	UGC /SCI/SCIE/ WOS	0013-4651	Mariyappan, V.; Keerthi , M.; Chen, S.-M.; Boopathy, G. Facile Synthesis of α -Sm ₂ S ₃ /MoS ₂ Bimetallic Sulfide as a High-Performance Electrochemical Sensor for the Detection of Antineoplastic Drug 5-Fluorouracil in a Biological Samples. <i>Journal of The Electrochemical Society</i> 2020, 167 (11), 117506.	10/7/2020 DOI: 10.1149/1945-7111/aba1a5
22	ACS Sustainable Chemistry & Engineering	UGC /SCI/SCIE/ WOS	2168-0485	Jaysiva, G.; Manavalan, S.; Chen, S.-M.; Veerakumar, P.; Keerthi , M.; Tu, H.-S. MoN Nanorod/Sulfur-Doped Graphitic Carbon Nitride for Electrochemical Determination of Chloramphenicol. <i>ACS Sustainable Chemistry & Engineering</i> 2020, 8 (30), 11088-11098.	10/7/2020 https://dx.doi.org/10.1021/acssuschemeng.0c00502
23	ACS Applied Electronic Materials	UGC /SCI/SCIE/ WOS	2637-6113	Mariyappan, V.; Manavalan, S.; Chen, S.-M.; Jaysiva, G.; Veerakumar, P.; Keerthi , M. Sr@ FeNi-S Nanoparticles/Carbon Nanotubes Nanocomposite	9/6/2020 https://dx.doi.org/10.1021/acsaelm.0c00248

				with Superior Electrocatalytic Activity for Electrochemical Detection of Toxic Mercury (II). <i>ACS Applied Electronic Materials</i> 2020.	
24	Nanoscale	UGC /SCI/SCIE/ WOS	2040-3364	S. Manavalan, J. Ganesamurthi, S.-M. Chen, P. Veerakumar, M. Keerthi , A robust Mn@FeNi-S/graphene oxide nanocomposite as a high-efficiency catalyst for the non-enzymatic electrochemical detection of hydrogen peroxide, <i>Nanoscale</i> , 12 (2020) 5961 - 5972.	11/2/2020 https://doi.org/10.1039/C9NR09148C
25	Materials Chemistry and Physics	UGC /SCI/SCIE/ WOS	0254-0584	Gopal Boopathy, Murugan Keerthi , Shen-Ming Chen, M. J. Umapathy, Baskaran Naresh Kumar, Highly porous nickel molybdate@graphene oxide nanocomposite for the ultrasensitive electrochemical detection of environmental toxic pollutant catechol. <i>Materials Chemistry and Physics</i> , 239, 121982.	1/1/2020 https://doi.org/10.1016/j.matchemphys.2019.121982
26	Ecotoxicology and Environmental Safety	UGC /SCI/SCIE/ WOS	0147-6513	Jaysiva Ganesamurthi, Murugan Keerthi , Shen-Ming Chen, Ragurethinam Shanmugam, Electrochemical detection of thiamethoxam in food samples based on Co ₃ O ₄ Nanoparticle@Graphitic carbon nitride composite. <i>Ecotoxicology and Environmental Safety</i> , 189, 110035.	2/1/2020 https://doi.org/10.1016/j.ecoenv.2019.110035
27	ACS Applied Materials & Interfaces	UGC /SCI/SCIE/ WOS	1944-8244	Bhuvanenthiran Mutharani, Murugan Keerthi , Shen-Ming Chen, Palraj Ranganathan, Tse-Wei Chen, Shih-Yi Lee, Wen-Han Chang (2020, Feb). One- Pot Sustainable Synthesis of Ce ₂ S ₃ /Gum Arabic Carbon Flowers Nanocomposite for the	30/12/2019 https://dx.doi.org/10.1021/acsami.9b16123

				Detection of Insecticide Imidacloprid. <i>ACS Applied Materials & Interfaces</i> , 2020.	
28	Microchimica Acta	UGC /SCI/SCIE/ WOS	0026-3672	Murugan Keerthi , Bhuvanenthiran Mutharani, Shen-Ming Chen, Palraj Ranganathan, Carbon fibers coated with urchin-like copper sulfide for nonenzymatic voltammetric sensing of glucose. <i>Microchimica Acta</i> , (2019) 186:807.	19/11/2019 https://doi.org/10.1007/s00604-019-3915-6
29	Scientific reports	UGC /SCI/SCIE/ WOS	2045-2322	M. Keerthi , G. Boopathy, S.-M. Chen, T. W. Chen, B.-S. Lou, A core-shell molybdenum nanoparticles entrapped f-MWCNT s hybrid nanostructured material based non-enzymatic biosensor for electrochemical detection of dopamine neurotransmitter in biological samples. <i>Scientific reports</i> , 9 (2019) 1-12.	10/9/2019 https://doi.org/10.1038/s41598-019-48999-0
30	Journal of The Electrochemical Society	UGC /SCI/SCIE/ WOS	0013-4651	M. Keerthi , S. Manavalan, S.-M. Chen, P.-W. Shen, A Facile Hydrothermal Synthesis and Electrochemical Properties of Manganese dioxide@ graphitic Carbon Nitride Nanocomposite toward Highly Sensitive Detection of Nitrite. <i>Journal of The Electrochemical Society</i> , 166(2019) B1245-B50.	16/9/2019 DOI: 10.1149/2.0251914jes
31	ACS Omega	UGC /SCI/SCIE/ WOS	2470-1343	Shaktivel Manavalan, Pitchaimani Veerakumar, Shen-Ming Chen, Keerthi Murugan , and King-Chuen Lin* (2019, May). Binder-Free Modification of a Glassy Carbon Electrode by Using Porous Carbon for Voltammetric Determination of Nitro Isomers. <i>ACS Omega</i> , 2019, 4, 8907-8918.	23/5/2019 https://doi.org/10.1021/acsomega.9b00622
32	Composites Part B: Engineering	UGC /SCI/SCIE/	1359-8368	U. Rajaji, M. Keerthi , S.M. Chen, M.	20/10/2018 https://doi.org/10.1

		WOS		Govindasamy, T.-W. Chen, P.H. Lin, Graphene oxide encapsulated 3D porous chalcopyrite (CuFeS ₂) nanocomposite as an emerging electrocatalyst for agro-hazardous (methyl paraoxon) detection in vegetables. <i>Composites Part B: Engineering</i> , 160(2019) 268-76.	016/j.compositesb.2018.10.042
33	International Journal of Electrochemical Science	UGC /SCI/SCIE/ WOS	1452-3981	Murugan Keerthi , Gopal Boopathy, Shen-Ming Chen, Tse-Wei Chen, Syang- Peng Rwei, Xiaoheng Liu, An Efficient Electrochemical Sensor Based on Ag Nanoparticle Decorated MnO ₂ /reduced Graphene Oxide Ternary Nanocomposite for Detection of Acetaminophen in Human Urine Sample. <i>International Journal of Electrochemical Science</i> , 14 (2019) 346 – 358.	1/1/2019 doi: 10.20964/2019.01.59
34	Journal of The Electrochemical Society.	UGC /SCI/SCIE/ WOS	0013-4651	Gopal Boopathy, Murugan Keerthi , Shen-Ming Chen, Umopathy, Mani Govindasamy, Tse-Wei Chen, M. Ajmal Ali, Fahad M. A. Al-Hemaid, and M. S. Elshikh (2018, Dec). Graphene Oxide/ α -MnO ₂ Binary Nanosheets Based Non- Enzymatic Biosensor for Pico-Molar Level Electrochemical Detection of Biomarker (Guanine) in DNA Sample. <i>Journal of The Electrochemical Society</i> , 165 (14) B651-B658.	18/10/2018 DOI: 10.1149/2.0331814jes
35	International Journal of Electrochemical Science	UGC /SCI/SCIE/ WOS	1452-3981	Karthika pichaimuthu, Murugan Keerthi , Shen-Ming Chen, Tse-Wei Chen, Chaochin Su (2018, Aug). Silver Nanoparticles Decorated on Graphene Oxide Sheets for Electrochemical Detection of Ascorbic Acid(AA) in	1/8/2018 doi: 10.20964/2018.08.16

				Human Urine Sample. <i>International Journal of Electrochemical Science</i> , 13 (2018) 7859 – 7869.	
36	International Journal of Electrochemical Science	UGC /SCI/SCIE/ WOS	1452-3981	Murugan Keerthi , Vengudusamy Renganathan, Shen-Ming Chen, Tse-Wei Chen (2018, Feb). One-pot synthesis of MoS ₂ flowers grown on prussian blue cubes for the sensitive detection of catechol in water samples. <i>International Journal of Electrochemical Science</i> , 13 (2018) 1568 – 1576.	1/2/2018 doi: 10.20964/2018.02.51
37	Journal of The Electrochemical Society	UGC /SCI/SCIE/ WOS	0013-4651	Murugan Keerthi , Muthumariappan Akilarasan, Shen-Ming Chen, Sakthivel Kogularasu, Mani Govindasamy, Veerappan Mani, M. Ajmal Ali, Fahad M. A. Al-Hemaid, and M. S. Elshikh (2018, Jan). One-pot biosynthesis of reduced graphene oxide/Prussian blue microcubes composite and its sensitive detection of prophylactic drug dimetridazole. <i>Journal of The Electrochemical Society</i> , 165 (2) B27-B33.	13/1/2018 DOI: 10.1149/2.0591802jes
38	International Journal of Electrochemical Science	UGC /SCI/SCIE/ WOS	1452-3981	Veerappan Mani, Rajaji Umamaheswari, Shen-Ming Chen, Mani Govindasamy, Chaochin Su, Anandaraj Sathiyam, Johnson Princy Merlin, Murugan Keerthi (2017). Highly Sensitive Determination of Folic Acid Using Graphene Oxide Nanoribbon Film Modified Screen Printed Carbon Electrode. <i>International Journal of Electrochemical Science</i> , 12 (2017) 475 – 484.	1/1/2017 doi: 10.20964/2017.01.34
39	Journal of Dispersion Science and	UGC /SCI/SCIE/ WOS	01932691	M.S. Alam, A.M. Siddiq, N. Kamely, M. Keerthi , R.U. Maeshwari, A.B.	3/8/2015 https://doi.org/10.1080/01932691.201

	Technology			Mandal, Micellization behavior of a cationic gemini surfactant, pentanediyl-1, 5-bis (dimethylcetylammmonium bromide): effect of asparagine and temperature, <i>Journal of Dispersion Science and Technology</i> , 36(2015) 1134-1139.	4.956117
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WEBINARS [National/International]

S.no.	Organized by	State/National/International	Topic	Date(s)
1	Sanghamam College of Arts And Science Source	State	Electrochemical Sensors and Applications	26/08/2021
2	Dr. M.G.R. Educational and Research Institute	International	Carbon-based Materials for Electrochemical Sensors	22/10/2021

OTHERS:

1. Delivering a speech as a **keynote speaker** on the topic of electrochemical sensors and biosensors in the international virtual conference on “**Innovative Strategies in Chemical Science and Technology**” (ISCST2020) held on 27-28 June 2020 at Bhaktavatsalam memorial college for women, Chennai.
2. Organized National Webinar on “**Atom by Atom Engineering in Cluster Science** on 06.02.2023 PG & Research Department of Chemistry, Ethiraj College for Women, Egmore, Chennai - 600 008.