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EDUCATION

January 2008 to March 2013	Postdoctoral Research Fellow **(PDF)** National University of Singapore (NUS), Singapore
May 2008	Doctor of Philosophy (**Ph.D.)** Microbiology Bharathidasan University & Central Electrochemical Research Institute (CSIR-CECRI), Karaikudi "***Identification of hydrocarbon degrading bacteria by 16s rDNA gene sequencing and their role on corrosion of petroleum product pipeline***"
April 2000	Master of Science **(M.Sc.)**Microbiology Manonmaniam Sundaranar University, Tirunelveli, Tamilnadu, India.
April 1998	Bachelor of Science **(B.Sc.)**Biochemistry Manonmaniam Sundaranar University, Tirunelveli, Tamilnadu, India.

CAREER

2013 – Present	**Assistant Professor (SG)**, Thiruvalluvar University, Vellore, India.
2008 – 2013	**Postdoctoral Research Fellow**, National University of Singapore (NUS).
2006 – 2008	**Senior Research Fellow**, CSIR-CECRI, Karikudi, India.
2005 – 2006	**Junior Research Fellow**, CSIR-CECRI, Karikudi, India.
2002 – 2003	**Project Fellow**, CSIR-CECRI, Karikudi, India.
2001 – 2002	**Project Assistant**, Sri Sankara Arts & Science College, Kancheepuram
2000 – 2001	**Lecturer**, Sri Sankara Arts & Science College, Kancheepuram, Tamilnadu

AREAS OF INTEREST

- Microbiologically Influenced Corrosion of aqueous/non-aqueous environments
- Biofilm studies
- Biodegradation of Hazardous & Emerging pollutants,
- Molecular Microbiology
- Integrated Remediation Technology for waste management
- Bioleaching of precious metals from minerals and waste materials
- Biosurfactants & their applications
- Airborne bacteria (Aerobiology)

SUMMARY OF RESEARCH

Molecular identification of the corrosive microbial communities and biocorrosion and electrochemical behaviour of hydrocarbon-degrading bacteria on various engineering materials and its corrosion control strategies using biocide/inhibitors. In addition, biofilm formation and its role/mechanism in the biocorrosion of different metals were investigated. We screened many eco-friendly compounds and selected some green inhibitors to inhibit the microbial corrosion problems in the oil reservoir conditions. Additionally, many biocides and chemical inhibitors are also applied to inhibit the biofilm formation over the metal surfaces.

In addition, we also carried out the biodegradation of petroleum hydrocarbons using bacterial strains with reference to bioremediation purposes. We are also interested in biosurfactant studies such as a screening and optimization of culture conditions for enhanced productions and their role in the biodegradation of hydrocarbons and might be applied for other environmental applications such as microbial oil recovery, bioremediation, as an emulsifier the in the food industry also utilized for pharmaceutical applications. Also, we have interested in wastewater, textile and tannery effluent treatment using integrated approaches of electro-kinetics with biodegradation. We also fabricated microbial fuel cells for wastewater treatment along with a generation of electric power.

HONOURS/AWARDS/FELLOWSHIP

27-02-2023	Special Appreciation Award	Dr. Tamilisai Soundararajan, Honourable Governor of Telangana, and Lieutenant Governor of Puducherry (Additional charge) given award for executing the work on Skill oriented TRAINING program to the Thiruvalluvar University students

21-09-2018	Research Excellence Award	International Conference on Recent Trends in Science & Technology, AIMST University, Kedah, Malaysia
07-12-2016	Best Poster Award	ASIA-Pacific Conference on Biotechnology for Waste Conversion, Hong Kong Baptist University, Hong Kong, China
10-09-2015	Best Paper Award	Emerging Trends in Biological and Environmental Sciences, K.M.G. College of Arts and Science.
2013	Ramalingaswamy Fellow	Department of Biotechnology (DBT), Govt. of India
05.04.2006	Senior Research Fellow (SRF)	CSIR (Council of Scientific & Industrial Research)
12.10.2005	Junior Research Fellow (JRF)	Evaluation of engineering materials for marine conditions with special reference to corrosion and biofouling, Central Electrochemical Research Institute (CSIR)
2004	Best Paper Award	Corrosion problems in fire protection system: A case study, 12th National Corrosion Council of India (NCCI), Visakhapatnam (A.P)
01-06-2003 to 12-08-2003	Project Fellow	Conducting survey and design of CP system for the pipelines to be laid between HPLC, Ghatlkesar and BPCL, Cheralapalli Central Electrochemical Research Institute (CSIR)
04.03.2002 to 02.03.2003	Project Fellow	Studying the causes of corrosion and suggestion of remedial measures for internal corrosion in petroleum product Pipeline between kandla port and Bhatinda Terminal, Central Electrochemical Research Institute (CSIR)
01.06.2001 to 28.02.2002	Project Fellow	Bioactive compounds from Marine Actinomycetes, International Foundation for Science, Sweden, Sri Sankara Arts & Science College

RESEARCH ACTIVITIES

Ph.D. student thesis completed: 09

Dr. P. Elumalai	**Microbial influenced corrosion by thermophilic bacteria in petroleum industry** (24.03.2014 – 19.09.2017)
Dr. P. Parthipan	**Biocorrosive microbial communities in petroleum facilities** (24.03.2014 – 07.08.2017)
Dr. K. Sathishkumar	**An integrated approach of electro-oxidation and biodegradation towards remediation of textile and tannery effluents** (22.12.2014 – 02.03.2018)
Dr. J. Narenkumar	**Community analysis of bacterial biofilm in cooling water system and its impact on corrosion** (02.01.2015 – 29.02.2018)

Dr. R.K. Sarankumar	**Bio-Electro kinetic remediation of heavy metal and petroleum contaminated soil** (14.07.2016 – 29.11.2019)
Dr. G. Baluswamy (Part-time)	**Studies on phytoremediation efficiency in tannery effluent contaminated soil environment** (14.07.2016 – 24.01.2020)
Dr. R. Prashanth	**Establishment of molecular detection for *Toxoplasma gondii*, Rubella virus, Cytomegalovirus, Herpes simplex virus and *Treponema pallidum* (Syphilis) (TORCH-S) infections by using a real-time PCR to diagnose infections among pregnant woman and high-risk babies from rural and peri-urban population of Vellore District in Tamil Nadu** (10.05.2018 – 09.12.2021)
Dr. A. Arul Prakash	**Potential application of marine bacterial biosurfactant in remediation of environmental pollutants** (15.12.2018 – 28.03.2022)
Dr.S. Kokilaramani	**Application of Natural Products for Inhibiting Biofilm Formation on Control of Biocorrosion in Various Engineering Materials** (12.02.2020 – 30.01.2023)

Ph.D. Supervision (ongoing): 04

Mr. B. Muthukumar	Biodegradation of crude oil using effective oil degrading bacteria isolated from oil contaminated environment
Mr. S. Abilaji	Dye degradation
Mr. A. Satheesh Kumar	Pesticide degradation
Ms. E. Janani	Characterization of microplastics contamination in various environmental samples

PDF Mentorship Completed: **02**

Dr. A. Selvi	DST–SERB (N-PDF Scheme)	**Development of an Integrated Approach of Bioleaching and Enhanced Electro-Kinetic remediation (Beer) Technology** 2017-2019
Dr. P. Dhandapani	UGC (DSK-PDF Scheme)	**Development of Rotating Electrode for Hydrogen from Urea-Rich Wastewater by Electrochemical Method** 2018-2021

M. Sc. research projects completed: 27

M. Phil. research projects completed: 03

Courses Taught

1. Microbiology
2. Virology
3. Pharmaceutical Technology
4. Environmental Biotechnology
5. Research Methodology

COURSES

1. **UGC** – Sponsored Orientation Course - **Orientation Course** Batch – 111 conducted by UGC Academic Staff College University of Madras, Chennai, Tamilnadu held from 22.05.2013 to 18.0.2013 and obtained grade **"A"**.
2. **UGC –** Sponsored **Refresher Course** in Life Sciences (Interdisciplinary) conducted by UGC Human Resource Development Centre, Bharathiar University, Coimbatore, Tamilnadu held from 06.05.2015 to 26.05.2015 and obtained **"A"** grade.
3. **UGC –** Sponsored **Refresher Course** in Life Science (Interdisciplinary) conducted by UGC Human Resource Development Centre, Bharathidasan University, Tiruchirappalli, Tamilnadu held from 16.07.2019 to 29.07.2019 and obtained **"A"** grade.
4. **UGC –** Sponsored Online **Refresher Course** in Life Science (Interdisciplinary) conducted by UGC Human Resource Development Centre, Bharathidasan University, Tiruchirappalli, Tamilnadu held from 08.09.2021 to 21.09.2021 and obtained **"A"** grade.
5. **MOOC – SWAYAM** Online **Course** in **TECHNOLOGY ENABLED LEARNING** conducted by **NITTTR**, Chennai from July to September 2021 with a 70% score.
6. **MOOC – SWAYAM** Online **Course** in **STUDENT PSYCHOLOGY** conducted by **NITTTR**, Chennai from July to September 2021 with an 85% score.
7. **MOOC – SWAYAM** Online **Course** in **STUDENT ASSESSMENT** conducted by **NITTTR**, Chennai from July to September 2021 with an 83% score.

PROFESSIONAL BODIES

1. **Life Member** (SPER/LM/TN/254) of the **Society of Pharmaceutical Education & Research (SPER)**, for the cultivation and promotion of the study and practice of pharmaceutical science education & research. Date: 12-Jul-2019.

EDITORIAL BOARD MEMBER

1. Recent Patents in Corrosion Science - from 2009.
2. Frontier in Environmental Science, section Wastewater Management – from 2013.
3. European Journal of Applied Sciences and Technology (EUJAST) - from 2014.
4. Journal of Environment and Biotechnology Research- from 2015.

REVIEWER OF JOURNALS

Elsevier: Bioresource Technology, Fuel, Material Physics and Chemistry, Journal of Material Science and Technology, Journal of Petroleum Science and Engineering, Marine Pollution Bulletin.

Taylor & Francis: Environmental Technology, Bioremediation, Biofouling, Green chemistry letters and reviews.

Springer: Petroleum Science, ESPR, Biodegradation, Environmental Monitoring Assessment, 3 Biotech.

REVIEWER OF Ph.D. THESIS

Reviewed Ph.D. theses from CSIR-CECRI- Karaikudi, Bharthiar University, Madurai Kamaraj University, Annamalai University- Chidambaram, and University of South Australia- Australia.

SPONSORED PROJECTS

S.No	Title of Project	Funding Agency	Period	Amount (Lakhs)
1.	Elucidating bacterial community interaction on metal surface and inhibiting the biofilm formation for control of biocorrosion in Cooling Water System	Tamil Nadu State Council for Higher Education-Research Grant Project (TANSCHE-RGP) (2019-20/TVU/HECP-0059)	2021-2024	17.45
2.	Molecular analysis of the Bacterial Diversity for Biocorrosion Control in Crude Oil Reservoir	DST–SERB (EEQ/2016/000449)	2017-2021	49.12
3.	Microbiological Influenced Corrosion Behaviour of Aerobic/Anaerobic Microbial Consortia with special reference to petroleum Cured Oil Industry	UGC-MRP (MRP-MAJOR-MICR-2013-31825)	2015-2018	18
4.	Electrochemical Behaviour of	DBT–Ramalingaswami	2013-2018	32.5

	Thermophilic/Barophilic Bacteria with Special Reference to Petroleum Industry	Fellowship (102/IFD/SAN/2887/2013)		
5.	Electrochemical and Biocorrosion Behaviour of Thermophilic/Barophilic Bacteria with Special Reference the Petroleum Industry	DST-SERB (SB/YS/LS-40/2013)	2013-2016	11.2

PDF PROJECTS

S.No	Title of Project	Funding Agency	Period	Amount (Lakhs)
1.	Development of Rotating Electrode for Hydrogen from Urea-Rich Wastewater by Electrochemical Method	UGC (DSK-PDF Scheme) F.4-2/2006 (BSR) BL/17-18/0343	2018-2021	19
2.	Development of an Integrated Approach of Bioleaching and Enhanced Electro-Kinetic remediation (Beer) Technology	DST–SERB (N-PDF Scheme) (PDF/2016/002558)	2017-2019	19.2

PUBLICATIONS

2023

1. Abilaji, S., Sathishkumar, K., Narenkumar, J., Alsalhi, M.S., Devanesan, S., Parthipan, P., Muthuraj, B. and **Rajasekar, A.**, 2023. Sequential photo electro oxidation and biodegradation of textile effluent: Elucidation of degradation mechanism and bacterial diversity. *Chemosphere*, *331*,p.138816. https://doi.org/10.1016/j.chemosphere.2023.138816**IF: 8.943**
2. AlSalhi, M.S., Devanesan, S., **Rajasekar, A.**and Kokilaramani, S., 2023. Characterization of plants and seaweeds based corrosion inhibitors against microbially influenced corrosion in a cooling tower water environment. *Arabian Journal of Chemistry* https://doi.org/10.1016/j.arabjc.2022.104513**IF: 6.212**
3. Sujeeth, N.K., Aravinth, R., Thandeeswaran, M., Angayarkanni, J., **Rajasekar, A.**, Mythili, R. and Gnanadesigan, M., 2023. Toxicity analysis and biomarker response of Quinalphos Organophosphate Insecticide (QOI) on eco-friendly exotic Eudrilus eugeniae earthworm. *Environmental Monitoring and Assessment*, *195*(2), p.274. https://doi.org/10.1007/s10661-022-10834-x. **IF:3.307**
4. Sudarshan, S., Harikrishnan, S., RathiBhuvaneswari, G., Alamelu, V., Aanand, S., **Rajasekar, A.**and Govarthanan, M., 2023. Impact of textile dyes on human health and bioremediation of textile industry effluent using microorganisms: current status and future

prospects. *Journal of Applied Microbiology*. https://doi.org/10.1093/jambio/lxac064**IF:4.059**

5. Parthipan, P., Cheng, L., Dhandapani, P. and **Rajasekar, A.,**2023. Metagenomics diversity analysis of sulfate-reducing bacteria and their impact on biocorrosion and mitigation approach using an organometallic inhibitor. *Science of The Total Environment*.https://doi.org/10.1016/j.scitotenv.2022.159203**IF:10.754**
6. Wadood, H.Z., **Rajasekar, A.,**Farooq, A. and Deen, K.M., 2023. Effect of Bacillus and Pseudomonas biofilms on the corrosion behavior of AISI 304 stainless steel. *International Journal of Materials Research*. https://doi.org/10.1515/ijmr-2022-0257**IF: 0.678**
7. Muthukumar, B., Surya, S., Sivakumar, K., AlSalhi, M.S., Rao, T.N., Devanesan, S., Arunkumar, P. and **Rajasekar, A.,**2023. Influence of bioaugmentation in crude oil contaminated soil by Pseudomonas species on the removal of total petroleum hydrocarbon. *Chemosphere*.https://doi.org/10.1016/j.chemosphere.2022.136826**IF:8.943**

2022

8. YU, T., **Rajasekar, A.** and Zhang, S., 2022. A Decennials Study of the Trend of antibiotics studies in China.
9. Ravi, A., Ravuri, M., Krishnan, R., Narenkumar, J., Anu, K., Alsalhi, M.S., Devanesan, S., Kamala-Kannan, S. and **Rajasekar, A.***, 2022. Characterization of petroleum degrading bacteria and its optimization conditions on effective utilization of petroleum hydrocarbons. *Microbiological Research*, *265*, p.127184. https://doi.org/10.1016/j.micres.2022.127184**IF:5.07**
10. Dhandapani, P., Santhoshkumar, M., Narenkumar, J., AlSalhi, M.S., Kumar, P.A., Devanesan, S., Kokilaramani, S. and **Rajasekar, A.***, 2022. Bio-approach: preparation of RGO-AgNPs on cotton fabric and interface with sweat environment for antibacterial activity. *Bioprocess and Biosystems Engineering*, pp.1-13.https://doi.org/10.1007/s00449-022-02789-7**IF: 3.434**
11. Sathishkumar, K., Kannan, V.R., Alsalhi, M.S., **Rajasekar, A.**, Devanesan, S., Narenkumar, J., Kim, W. and Liu, X., 2022. Intimately coupled gC3N4 photocatalysis and mixed culture biofilm enhanced detoxification of sulfamethoxazole: Elucidating degradation mechanism and toxicity assessment. *Environmental Research*, p.113824. https://doi.org/10.1016/j.envres.2022.113824**IF: 8.431**
12. Suganya, M., Preethi, P.S., Narenkumar, J., Prakash, A.A., Devanesan, S., AlSalhi, M.S., **Rajasekar, A.** and Nanthini, A.U.R., 2022. Synthesis of Silver Nanoparticles From

Indian Red Yeast Rice and Its Inhibition of Biofilm in Copper Metal in Cooling Water Environment.https://doi.org/10.21203/rs.3.rs-1179555/v1.

13. Harikrishnan, S., Sudarshan, S., Alsalhi, M.S., Parivallal, M., Devanesan, S., SenthilBalan, S., Moovendhan, M., **Rajasekar, A**. and Jayalakshmi, S., 2022. Production and characterization of biosurfactant from Enterobacter cloacae SJ2 isolated from marine sponge Clathria sp. *Biomass Conversion and Biorefinery*, pp.1-12. https://doi.org/10.1007/s13399-022-03466-1**IF:4.050**
14. Nandagopal, B., **Aruliah, R.,**Ramamurthy, M., Saravanan, N. and Rajendiran, P., 2022. Identification of Immunogenic T and B-Cell Epitope Peptides of Rubella Virus E1 Glycoprotein towards the Development of Highly Specific Immunoassays and Vaccine. *Journal of Advances in Biology & Biotechnology*, *25*(7), pp.37-43.
15. Prakash, A.A., Sathishkumar, K., AlSalhi, M.S., Devanesan, S., Mani, P., Kamalakannan, S., Vijayanand, S. and **Rajasekar, A.***, 2022. Integrated approach of photo-assisted electrochemical oxidation and sequential biodegradation of textile effluent. *Environmental Pollution*, p.119412. https://doi.org/10.1016/j.envpol.2022.119412**IF: 9.988**
16. Elumalai, P., Yi, X., Chen, Z., **Rajasekar, A.**, de Paiva, T.C.B., Hassaan, M.A., Ying, G.G. and Huang, M., 2022. Detection of Neonicotinoids in agriculture soil and degradation of thiacloprid through photo degradation, biodegradation and photo-biodegradation. *Environmental Pollution*, p.119452. https://doi.org/10.1016/j.envpol.2022.119452**IF: 9.988**
17. Parthipan, P., Cheng, L., Dhandapani, P., Elumalai, P., Huang, M. and **Rajasekar, A.**, 2022. Impact of biosurfactant and iron nanoparticles on biodegradation of polyaromatic hydrocarbons (PAHs). *Environmental Pollution*, p.119384. https://doi.org/10.1016/j.envpol.2022.119384**IF: 9.988**
18. Suganya, K., Usha Raja Nanthini, A., Narenkumar, J., Abilaji, S., **Rajasekar, A.**, Sivakumar, S., Prasath, S., Almoallim, H.S. and Alahmadi, T.A., 2022. Impact of Light and Temperature on Growth, Intracellular and Extracellular Pigment, and Lovastatin Yield by Monascus ruber in Synthetic Medium. *Advances in Materials Science and Engineering*, *2022*.https://doi.org/10.1155/2022/2808733**IF: 2.098**
19. Kokilaramani, S., Narenkumar, J., AlSalhi, M.S., Devanesan, S., Obulisamy, P.K., Balagurunathan, R. and **Rajasekar, A.**, 2022. Evaluation of crude methanolic mangrove leaves extract for antibiofilm efficacy against biofilm-forming bacteria on a cooling tower

wastewater system. *Arabian Journal of Chemistry*, p.103948. https://doi.org/10.1016/j.arabjc.2022.103948**IF: 6.212**

20. Muthukumar, B., Al Salhi, M.S., Narenkumar, J., Devanesan, S., Rao, T.N., Kim, W. and **Rajasekar, A.***, 2022. Characterization of two novel strains of Pseudomonas aeruginosa on biodegradation of crude oil and its enzyme activities. *Environmental Pollution*, *304*, p.119223. https://doi.org/10.1016/j.envpol.2022.119223**IF: 9.988**
21. Sathishkumar, K., Li, Y., Alsalhi, M.S., Muthukumar, B., Gaurav, G.K., Devanesan, S., **Rajasekar, A.** and Manikandan, R., 2022. Enhanced biological nitrate removal by gC3N4/TiO2 composite and role of extracellular polymeric substances. *Environmental Research*, *207*, p.112158.https://doi.org/10.1016/j.envres.2021.112158**IF: 8.431**
22. Preethi, P.S., Suganya, M., Narenkumar, J., AlSalhi, M.S., Devanesan, S., Nanthini, A.U.R., Kamalakannan, S. and **Rajasekar, A.**, 2022. Macrolepiota-mediated synthesized silver nanoparticles as a green corrosive inhibitor for mild steel in re-circulating cooling water system. *Bioprocess and Biosystems Engineering*, pp.1-9. https://doi.org/10.1007/s00449-021-02673-w**IF:3.434**
23. Suriyakala, G., Sathiyaraj, S., Devanesan, S., AlSalhi, M.S., **Rajasekar, A.**, Maruthamuthu, M.K. and Babujanarthanam, R., 2022. Phytosynthesis of silver nanoparticles from Jatropha integerrima Jacq. flower extract and their possible applications as antibacterial and antioxidant agent. *Saudi Journal of Biological Sciences*, *29*(2), pp.680-688.https://doi.org/10.1016/j.sjbs.2021.12.007 **IF: 4.052**
24. Muthukumar, B., Parthipan, P., AlSalhi, M.S., Prabhu, N.S., Rao, T.N., Devanesan, S., Maruthamuthu, M.K. and **Rajasekar, A.**, 2022. Characterization of bacterial community in oil-contaminated soil and its biodegradation efficiency of high molecular weight (> C40) hydrocarbon. *Chemosphere*, *289*, p.133168. **IF: 8.943**10.1016/j.chemosphere.2021.133168 **IF: 8.943**
25. Saravanan, K., **Aruliah, R.,**Prakash, J.A., Kannan, K., Paramasivan, R. and David, E., 2022. Comparison of Molecular and Morphological Identification of Ticks in Vellore District of Tamil Nadu.
26. Parthipan, P., Cheng, L., **Rajasekar, A.,**Karthikeyan, O.P. and Rahman, P.K., 2022. Biosurfactants—A next generation biomolecules for enhanced biodegradation of organic pollutants. *Frontiers in Microbiology*, *13*. doi: 10.3389/fmicb.2022.947801**IP: 6.064**

2021

27. Suriyakala, G., Sathiyaraj, S., Devanesan, S., AlSalhi, M.S., **Rajasekar, A.**, Maruthamuthu, M.K. and Babujanarthanam, R., 2021. Phyto Synthesis of Silver Nanoparticles from Jatropha integerrima Jacq. Flower Extract and Their Possible Applications as Antibacterial and Antioxidant Agent. *Saudi Journal of Biological Sciences*. https://doi.org/10.1016/j.sjbs.2021.12.007**IF: 4.052**
28. Vijayalakshmi, S., **Rajasekar, A.**, Veeraraghavan, V.P., Ghidan, A.Y., Al Antary, T.M., Karthikkumar, V., Damodaran, L.P.M., Vinayagam, R. and David, E., 2021. The pro-apoptotic and cytotoxic efficacy of polydatin encapsulated poly (lactic-co-glycolic acid) (PLGA) nanoparticles. *Process Biochemistry*, *111*, pp.210-218. **IF:4.885**https://doi.org/10.1016/j.procbio.2021.10.033
29. Selvi, A., AlSalhi, M.S., Devanesan, S., Maruthamuthu, M.K., Mani, P. and **Rajasekar, A.**, 2021. Characterization of biospheric bacterial community on reduction and removal of chromium from tannery contaminated soil using an integrated approach of bio-enhanced electrokinetic remediation. *Journal of Environmental Chemical Engineering*, *9*(6), p.106602. **IF:7.968**https://doi.org/10.1016/j.jece.2021.106602
30. Narenkumar, J., Devanesan, S., AlSalhi, M.S., Kokilaramani, S., Ting, Y.P., Rahman, P.K. and **Rajasekar, A.**, 2021. Biofilm formation on copper and its control by inhibitor/biocide in cooling water environment. *Saudi journal of biological sciences*, *28*(12), pp.7588-7594. **IF:4.052**doi: 10.1016/j.sjbs.2021.10.012
31. Harikrishnan, S., Parivallal, M., Alsalhi, M.S., Sudarshan, S., Jayaraman, N., Devanesan, S., **Rajasekar, A.** and Jayalakshmi, S., 2021. Characterization of active lead molecules from Lissocarinus orbicularis with potential antimicrobial resistance inhibition properties. *Journal of infection and public health*, *14*(12), pp.1903-1910. **IF: 7.537** https://doi.org/10.1016/j.jiph.2021.10.003
32. Narenkumar, J., Ananthaselvam, A., Alsalhi, M.S., Devanesan, S., Kadier, A., Kannan, M.M. and **Rajasekar, A.**, 2021. Effect of crude methanolic extract of Lawsonia inermis for anti-biofilm on mild steel 1010 and its effect on corrosion in a re-circulating wastewater system. *Journal of King Saud University-Science*, *33*(8), p.101611. **IF:3.829**https://doi.org/10.1016/j.jksus.2021.101611
33. Elumalai, P., Parthipan, P., Huang, M., Muthukumar, B., Cheng, L., Govarthanan, M. and **Rajasekar, A.**, 2021. Enhanced biodegradation of hydrophobic organic pollutants by the bacterial consortium: Impact of enzymes and biosurfactants. *Environmental Pollution*, *289*, p.117956. **IF: 9.988.**https://doi.org/10.1016/j.envpol.2021.117956

34. Kokilaramani, S., **Rajasekar, A.**, AlSalhi, M.S. and Devanesan, S., 2021. Characterization of methanolic extract of seaweeds as environmentally benign corrosion inhibitors for mild steel corrosion in sodium chloride environment. *Journal of Molecular Liquids*, 340, p.117011. https://doi.org/10.1016/j.molliq.2021.117011**IF: 6.633**
35. Rajendiran, P., Saravanan, N., Ramamurthy, M., Sankar, S., **Aruliah, R.**, Nandagopal, B. and Sridharan, G., 2021. Standardization of an in-house multiplex real-time polymerase chain reaction for the simultaneous detection of Toxoplasma gondii, Rubella virus, cytomegalovirus, herpes simplex Virus 1 and 2, and Treponema pallidum infection among pregnant women. *Indian journal of public health*, *65*(4), p.369. **IF: 2.219**
36. Elumalai, P., Parthipan, P., AlSalhi, M.S., Huang, M., Devanesan, S., Karthikeyan, O.P., Kim, W. and **Rajasekar, A.***, 2021. Characterization of crude oil degrading bacterial communities and their impact on biofilm formation. *Environmental Pollution*, p.117556. https://doi.org/10.1016/j.envpol.2021.117556**IF: 9.988**
37. Rajendiran, P., Saravanan, N., Ramamurthy, M., Sankar, S., David, N., Nair, A., Aruliah, R., Nandagopal, B. and Sridharan, G., 2021. Seroprevalence of TORCH-S Infections among Pregnant Woman: A Study from Vellore District (South India). *Journal of Natural Science, Biology and Medicine*, *12*(2), pp.170-170. **IF: 0.49**
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corrosion. *Corrosion Science*, *47*(1), pp.257-271. **IF: 7.720**https://doi.org/10.1016/j.corsci.2004.05.016

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BOOKS/CHAPTER PUBLISHED

1. Parthipan, P., Rahman, P.K., Smith, M.L., Murugan, K., Ting, Y.P., Angaiah, S. and **Rajasekar, A.**, 2022. Biosurfactants-Mediated Remediation of Hydrocarbon Pollution. In *Hydrocarbon Biotechnology* (pp. 211-234). Apple Academic Press.
2. Vaishnavi, J., Parthipan, P., Arul Prakash, A., Sathishkumar, K. and **Rajasekar, A.**, 2021. Biosurfactant- Assisted Bioremediation of Crude Oil/Petroleum Hydrocarbon Contaminated Soil. *Handbook of Assisted and Amendment: Enhanced Sustainable Remediation Technology*, pp.313-329. https://doi.org/10.1002/9781119670391.ch16
3. Parthipan, P., Cheng, L., **Rajasekar, A.** and Angaiah, S., 2021. Microbial Surfactants are Next- Generation Biomolecules for Sustainable Remediation of Polyaromatic Hydrocarbons. *Biosurfactants for a Sustainable Future: Production and Applications in the Environment and Biomedicine*, pp.139-158. https://doi.org/10.1002/9781119671022.ch7
4. Parthipan, P., Prakash, C., Perumal, D., Elumalai, P., **Rajasekar, A.** and Cheng, L., 2021. Biogenic Nanoparticles and Strategies of Nano-bioremediation to Remediate PAHs for a Sustainable Future. In *Biotechnology for Sustainable Environment* (pp. 317-337). Springer, Singapore. https://doi.org/10.1007/978-981-16-1955-7_13
5. Kadier A., Yuliasni, R., Sapua, S.M., Ilyas, R.A., Rai, P.K., Ma, P.C., **Rajasekar, A.**, Alabbosh, K.F.S., Hamid, A.A., Hasan, H.A., 2021. The Role of Microbial Electrolysis Cell in Bioenergy Production: Current Applications and Pilot Plant Experiences.

Bioelectrochemical Systems. Springer, Singapore. https://doi.org/10.1007/978-981-15-6868-8_15

6. Saranya, S., Selvi, A., Babujanarthanam, R., **Rajasekar, A.** and Madhavan, J., 2020. Insecticidal Activity of Nanoparticles and Mechanism of Action. In *Model Organisms to Study Biological Activities and Toxicity of Nanoparticles* (pp. 243-266). Springer, Singapore. https://doi.org/10.1007/978-981-15-1702-0_12
7. Vaishnavi, J., Arulprakash, A., Selvi, A. and **Rajasekar, A.**, 2020. Marine biomass toward biofuel production. In *Refining Biomass Residues for Sustainable Energy and Bioproducts* (pp. 451-462). Academic Press. https://doi.org/10.1016/B978-0-12-818996-2.00020-X
8. Mulla, S.I., Bharagava, R.N., Belhaj, D., Saratale, G.D., Kumar, A., **Rajasekar, A.**, Tallur, P.N., Edalli, V.A., Hu, A. and Yu, C.P., 2019. Microbial Degradation of Phenolic Compounds. *In Microbes and Enzymes in Soil Health and Bioremediation* (pp. 305-320). Springer, Singapore. https://doi.org/10.1007/978-981-13-9117-0_13
9. **Rajasekar, A.**, 2017. Biodegradation of petroleum hydrocarbon and its influence on corrosion with special reference to petroleum industry. In *Biodegradation and Bioconversion of Hydrocarbons* (pp. 307-336). Springer, Singapore. https://doi.org/10.1007/978-981-10-0201-4_9.
10. **Rajasekar, A.**, Maruthamuthu, S., Ting, Y.P., Balasubramanian, R. and Rahman, P.K., 2012. Bacterial degradation of petroleum hydrocarbons. In *Microbial Degradation of Xenobiotics* (pp. 339-369). Springer, Berlin, Heidelberg. https://doi.org/10.1007/978-3-642-23789-8.

Total Citations: 4302; h-index: 37; i10-index: 91; (Source: Google Scholar) – updated on 08-06-2023.

INVITED LECTURES/PARTICIPATION IN CONFERENCES

1. **Dr. A. Rajasekar** has service rendered as a Special Guest and Chaired a session in the National Science Day organized by "National Council for Science & Technology Communication, Department of Science and Technology, Government of India, Tamil Nadu State Council for Science & Technology, Government of Tamilnadu and Marudhar Kesari jain College for Women, Vaniyambadi" on 28th February, 2022.

2. Delivered an invited talk in 4th International conference on Bioenergy, Environment, and sustainable technologies (BEST-2019) organized by Arunai Engineering College, Thiruvannamalai, India, during 28-30th, January 2019.
3. Presented a poster in NUS-VIT symposium "Theranostics in Health and Disease" organized by VIT University, Vellore, India, during 20-22nd, July 2017.
4. **Dr. A. Rajasekar** has served as Chair-person in the National Seminar on "Frontiers in Bioprocess Technology and Microbial Ecology (FBTME-2016)" organized by the Department of Microbiology, Periyar University, Selam during 28-29th January, 2016.
5. Presented a paper in the 2nd International Conference on "Environment and Ecology" (ICEE 2016) held on 7-9th March 2016 at Bharathiar University.
6. Chaired a Session on "Impact of Hydrocarbon Pollution with Special reference to Petroleum Industry" in One day value added program on "Effect of pollution on natural resources and environmental Impact Assessment" -NREIA-2016, VIT University Vellore, Tamilnadu 30th April 2016.
7. **Dr. A. Rajasekar** has successfully completed SAKSHAM – IT Champion Training Program form 5th – 10th January 2015.
8. **Dr. A. Rajasekar** (2015) Microbial Corrosion Control in Cooling Water System Presented a Paper in International Conference on Recent Advances in Synthetic Biology, Bishop Heber College, Tiruchirapalli, on 8th – 9th January 2015.
9. P. Parthipan and **A. Rajasekar** (2015) Characterization of mesophilic hydrocarbon degrading bacteria in Indian crude oil reservoir presented in National Symposium on "Recent Advances in Biomedical Sciences" Thiruvalluvar University, Vellore, 26-27th February 2015.
10. **Dr. A. Rajasekar** delivered a Lead Lecture in the two days UGC Sponsored National Seminar on Recent Advances in Plant Science (RAPS - 2015) at P.V.K.N. Government College, Chittoor on 7th – 8th March 2015.
11. **A. Rajasekar** (2015) Role of Extracellular Polymeric Substances Produced by Mesophilic Bacteria on Corrosion of API 5LX Carbon Steel presented in National Conference on Recent Advances in Industrial Biotechnological Skills Development organized by Department of Botany, Thiagarajar College, Madurai, 30-31st March 2015.
12. Chaired a Session on "Bacterial degradation of hydrocarbon and its role on corrosion with special reference to petroleum industry" in International conference on "Converging Biotechnological Innovations for Health, Food and Environmental

welfare- ICCBI-2015", Karunya University, Coimbatore, Tamilnadu 2-4th December 2015.

13. Participated in the UGC sponsored National Seminar on "India A Hot Spot of Environmental Challenges and Need of the Multidisciplinary Approach to Solve the Environmental Issues" (IEMAEI-2015) held in Dept. Of zoology, P.V.K.N Govt. College, Chittoor during 15th-16th December 2015. He chaired a session and invited talk entitled "Biodegradation of Petroleum Hydrocarbon Degradation and its Influence on Corrosion with Special Reference to Petroleum Industry"
14. Presented a poster entitled "Biodegradation of crude oil by mesophilic bacteria and its influence on corrosion" in National Conference on Global Trends and Challenges in Biosciences organized by IAAM & Dr, MGR Janaki College of Arts and Science for Women, Chennai, 5-6th December 2014.
15. Presented a paper (oral) entitled" Characterization of corrosive bacterial consortia isolated from cooling tower" in National Symposium on Glimpse of Innovations in Biotechnology Organized by Biogalaxia, Bharathiyar University, Coimbatore, 3rd October 2013
16. **A.Rajasekar**, C.J. Hsien and R. Balasubramanian (2011). Oral presentation "Bioleaching of metals (Cu, Fe and Ag) from chalcopyrite ore by Acidophile group of bacteria". IV International Conference on Environmental, Industrial and Applied Microbiology (BioMicroWorld2011), Torremolinos (Spain), 14-16 September 2011.
17. O. P. Karthiekyan, A. Rajasekar, S. Manivannan and Rajasekhar Balasubramanian (2011). Oral Presentation "Bioleaching of precious metals from low-grade copper ores using mixed consortium in air-uplift bioreactors: performance evaluation under single and two stage configurations". IV International Conference on Environmental, Industrial and Applied Microbiology (BioMicroWorld2011), Torremolinos (Spain), 14-16 September 2011.
18. **A. Rajasekar**, O. P. Karthiekyan, S. Manivannan and Rajasekhar Balasubramanian (2011). Poster Presentation "Comparative Evaluation of Two Bioreactors for Bioleaching of Cu, Fe and Ag from chalcopyrite by Leptospirillum ferrooxidans". IV International Conference on Environmental, Industrial and Applied Microbiology (BioMicroWorld2011), Torremolinos (Spain), 14-16 September 2011.
19. Presented a paper at the National Seminar on Recent Trends in Biosciences Organized by K.M.G College of Art & Science, P.G. & Research Department of Biochemistry, on 15th October 2010.

20. Presented paper in the Fourteenth National Convention of Electrochemists (NCE-14) conducted at the Indira Gandhi Centre for Atomic Research, Kalpakkam on the 6th – 7th December, 2007.
21. Participated in the International Conference on "Recent Advances in Marine Antifouling Technology (RAMAT)" jointly organized y National Institute of Ocean Technology (NIOT) & International Biodeterioration and Biodegradation Society (IBBS), U.K., field during 6th – 8th November, 2006 at NIOT, Chennai, India.
22. Presented paper in the Eighth International Symposium on Advances in Electrochemical Science and Technology (ISAEST-8) Conducted at National Institute of Oceanography, Goa from 28th – 30th November 2006.
23. Participated in the Thirteenth National Congress on Corrosion Control held form 12th – 14th October 2006, at Taj Manjaraun, Mangalore.

SEMINAR/SYMPOSIUM/CONFERENCE CONDUCTED OR ORGANIZED

1. One day International seminar organized as member on "Recent Advances in Bioelectrochemical Technology" by Department of Biotechnology, Thiruvalluvar University, Vellore, 29th April 2022
2. One days National Science Day 2022 organized on "Integrated Approach in Science and Technology for a Sustainable Future" by Department of Biotechnology, Thiruvalluvar University, Vellore, 09th March 2022.
3. One day International seminar organized as member on "Recent Advances in Bioremedial Technology" by Department of Biotechnology, Thiruvalluvar University, Vellore, 31st January 2020.
4. Three days International symposium organized as member on "Recent Advances in Bioresource Technology" by Department of Biotechnology, Thiruvalluvar University, Vellore, 15-17th February 2017.
5. Two days national symposium organized on "Recent Advances in Biomedical Technology" by Department of Biotechnology, Thiruvalluvar University, Vellore, 26-27th February 2015.

ADMINISTRATIVE AND OTHER EXTRA ACTIVITIES

- Coordinator- EDII-HUB, Thiruvalluvar University
- Faculty-in-charge of Centre for Research in Thiruvalluvar University.

- Deputy Coordinator of NAAC Accreditation in Thiruvalluvar University, Vellore.
- Placement Cell Coordinator in Thiruvalluvar University, Vellore.
- P.A. as an additional charge to assist Research activities to Vice Chancellor
- Worked as Invigilator for writing and skill test for non-teaching posting in Thiruvalluvar University, Vellore.
- Served as an Oral Viva voce examiner for M. Phil and Ph. D.
- Conducted the Practical exam as external examiner for various University Departments and colleges.
- Worked as question paper setter for Microbiology courses for Bharathidasan University, Trichirapalli, Manonmaniam Sundaranar University, Tirunelveli, Madurai Kamaraj University, Madurai.
- Doctoral committee member for Ph.D. students of Sathyabama University-Chennai, SRM University-Kattankulathur and VIT University- Vellore.

COUNTRIES VISITED

Singapore, Malaysia, Spain, China, Italy, Poland, Indonesia and Thailand.