Bharathiar University

State University I "A++" Grade by NAAC I 26th Rank in MoE-NIRF
Maruthamalai Road, Coimbatore, Tamil Nadu - 641 046.

Dr R RAJKUMAR

Assistant Professor
Department of Environmental Sciences

Bharathiar University
Coimbatore, 641046
Tamil Nadu

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Research Area

- Carbon sequestration and climate change mitigation
- Green energies
- Wastewater treatment
- Aquatic Microbial Ecology

Courses Teaching

- Environmental Chemistry
- Ecotourism
- Waste Management and Bioremediation
- Environmental Geosciences

Research Experience: 17

Teaching Experience: 7

Research Credentials (as on January 2024 – Source: Google scholar)

H-index: 731 Citations: 13 i10-index: 14

Publications

International Journals: 20 National Journals: 5 Books/Chapters: 7
Conferences: 16

Career

At Bharathiar University

1. Designation : Assistant Professor
Period : November 2016 - Till Date

Other Institutes

1. Designation : Post Doctoral Fellow
Institution Name : National University of Malaysia, Malaysia
Period : June 2011 - December 2015

2. Designation : Post Doctoral Fellow
Institution Name : CSIR-Central Leather Research Institute, Chennai
Period : February 2016 - November 2016

Education

Ph. D.
Subject : Botany
Institution : Centre for Advanced Study in Botany
Affiliated University : University of Madras
Year of Award : January 2011

M. Sc.
Subject : Botany
Institution : Centre for Advanced Study in Botany
Affiliated University : University of Madras
Year of Award : April 2005

Dr R RAJKUMAR , Assistant Professor , Department of Environmental Sciences

B. Sc.
Subject : Botany
Institution : Government Arts College, Ariyalur
Affiliated University : Bharathidasan University
Year of Award : April 2002

Projects	**Research Guidance**
National Level	**Completed**
Ongoing - 1 completed - 5	Ph.D. - 2 M.Phil. - 1 PG - 18
	On Going
	Ph.D. - 2 PG - 2

Selected Publications

1. Biosorption potential of Stoechospermum marginatum for removal of heavy metals from aqueous solution: Equilibrium, kinetic and thermodynamic study

Chemical Engineering Research and Design. 203, 207-218 (January 2024)
NaduvilVeettil Sarangi and Renganathan Rajkumar

2. Assessment of phytochemicals from marine algae Ulva fasciata and Dictyota dichotoma with antioxidant and antimicrobial potential

Applied Chemical Engineering. 6:3, 1-13 (October 2023)
Naduvil Veettil Sarangi, Mullikkottu Veettil Saranya Prakasan, Renganathan Rajkumar, Sathiyaraj Srinivasan

3. Evaluation of chemical constituents of Stoechospermum marginatum and its potential for antioxidant and antimicrobial activity

Biomass Conversion and Biorefinery. 1-12 (February 2023)
N.V.Sarangi, A.BaalaHarini, R.Rajkumar, Ashokkumar.V

4. Cultivation of marine diatom, Amphora sp. in municipal wastewater for enhancing lipids toward sustainable biofuel production

South African Journal of Botany. 155, 288-297 (February 2023)
A.BaalaHarini, N.V. Sarangi, N.Nisha and R.Rajkumar

5. Development of sustainable bioproducts from microalgae biomass: Current status and future perspectives

BioResources. 17:4, 7285- 7312 (November 2022)
A.BaalaHarini, R.Rajkumar

6. Technical insights into carbon dioxide sequestration by microalgae: A biorefinery approach towards sustainable environment

Biomass Conversion and Biorefinery (February 2022)
R.Rajkumar, Mohd Sobri Takriff and Ashokkumar Veeramuthu

7. A green approach for the synthesis of silver nanoparticles by Chlorella vulgaris and its application in photocatalytic dye degradation activity

Environmental Technology & Innovation. 21, 101282 (February 2021)
R. Rajkumar, G. Ezhumalai and M. Gnanadesigan

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8. Enhanced production of lipid as biofuel feedstock from the marine diatom Nitzschia sp. by optimizing cultural conditions

Bioresources. 15:4, 7532-7550 (August 2020)
B. H. Anandapadmanaban, R. Rajkumar, and M.S. Takriff

9. Prospects of algae and their environmental applications in Malaysia: A case study

Journal of Bioremediation and biodegradation. 7:321 (January 2016)
R. Rajkumar, and M.S. Takriff

10. Nutrient removal of POME using POME isolated microalgae strain, Characium sp.

Advanced Materials Research. 1113, 364-369 (July 2015)
T. B. Tamil Selvam, R. Rajkumar, and M. S. Takriff

11. Nutrient removal from anaerobically treated Palm Oil Mill Effluent by Spirulina platensis and Scenedesmus dimorphus

Der Pharmacia Lettre. 7:7, 416-421 (July 2015)
R. Rajkumar, and M. S. Takriff

12. The current methods for the biomass production of the microalgae from waste waters – an overview

World Applied Sciences Journal. 31:10, 1744-1758 (January 2014)
Z. Yaakob, K.F. Kamarudin, R. Rajkumar, M. S. Takriff, and S. N. Badar

13. Potential of the micro and macro algae for biofuel production: A Brief Review

Journal of Bioresources. 9: 1, 1606-1633 (December 2013)
R. Rajkumar, Z. Yaakob, and M. S. Takriff

14. Bioremediation of palm oil mill effluents (POME) using Scenedesmus dimorphus and Chlorella vulgaris

International Journal of Advanced Science Letters. 19:10, 2914-2918 (October 2013)
K. F. Kamarudin, Z. Yaakob, R. Rajkumar, M. S. Takriff, and J. A. Ghani

15. Optimization of medium composition for the production of peroxidase by Bacillus sp

Der Pharma Chemica. 5:2, 167-174 (April 2013)
R. Rajkumar, Z. Yaakob, M. S. Takriff, and K. F. Kamarudin

16. Phycoremediation in anaerobically digested palm oil mill effluent using Cyanobacterium, Spirulina platensis

International Journal of Biobased Materials and Bioenergy. 6, 1–6 (December 2012)
A. Zainal, Z.Yaakob, M. S. Takriff, R. Rajkumar, and J. A. Ghani

17. In vitro anticancer activity of natural ?-carotene from Dunaliella salina EU5891199 in PC-3 cells

Biomedicine & Preventive Nutrition. 3:2, 99-105 (October 2012)
K.R. Jayappriyan, R. Rajkumar, V. Venkatakrishnan, S. Nagaraj, and R. Rengasamy

18. Purification and characterization of a protease produced by Bacillus megaterium RRM2: application in detergent and dehairing industries

Journal of Basic Microbiology. 51, 1-11 (July 2011)
R. Rajkumar, K.R. Jayappriyan, and R. Rengasamy

19. Unusual occurrence of non carotenogenic strains of Dunaliella bardawil and Dunaliella parva in India

Journal of Basic Microbiology. 51, 473–483 (June 2011)
K.R. Jayappriyan, R. Rajkumar, and R. Rengasamy

Dr R RAJKUMAR , Assistant Professor , Department of Environmental Sciences

20. Production and characterization of a novel protease from Bacillus sp RRM1 under Solid State Fermentation

Journal of Microbiology and Biotechnology. 21:6, 627-636 (April 2011)
R. Rajkumar, K.R. Jayappriyan, and R. Rengasamy

1. Algae materials for advanced biofuel production through the cost-effective process and integration of nanocatalysts

Algae Materials, Applications Benefitting Health, 1st Edition., 29-62. eBook ISBN: 9780443188176. Elsevier- Academic Publisher (March 2023)
G.C Singha, M. Vijayakumar, R. Rajkumar, K.R. Jayappriyan and S. Pujithaa

2. Bioactive Compounds from Algae: Potential Applications.

Algal Functional Foods and Nutraceuticals: Benefits, Opportunities, and Challenges. 1: 184-211. ISBN: 978-981-5051-88-9;eISBN: 978-981-5051-87-2 (Online)Bentham Science Publisher (November 2022)
K.R. Jayappriyan, C. Kurinjimalar, M. Kaviraj, M. Vijayakumar, R. Rajkumar and Rathinam Raja

3. Biodegradation of organic pollutants by microbial process

Environmental Microbiology: Emerging Technologies, 137-160. ISBN:3110727226, 9783110727227. Walter de Gruyter GmbH & Co KG, 2022 Publisher (September 2022)
Sarangi, N. V. and Rajkumar. R

4. Food wastes/residues: Valuable source of energy in circular economy

Handbook of Biofuels 1st Edition. Elsevier- Academic Press. ISBN: 9780128228104 (November 2021)
R. Rajkumar, and C. Kurinjimalar

5. Microbes and plant mineral nutrition

Microbiological activity for soil and plant health management, Springer Publisher. ISBN: 978-981-16-2921-1 (November 2021)
R. Rajkumar, and C. Kurinjimalar

6. Food and Nutraceutical Applications of Algae

Algae for Food: Cultivation, Processing and Nutritional Benefits, CRC Press-Taylor and Francis Group. ISBN 9780367762087 (October 2021)
K.R. Jayappriyan, B. Baskar, M. Vijayakumar, A. Brabakaran, R. Rajkumar, and S. Elumalai

7. The biology of microalgae

Biotechnical applications of microalgae: biodiesel and value added products, CRC Press, Taylor and Francis Group, UK. ISBN: 9780429087110 (May 2013)
R. Rajkumar and Z. Yaakob

1. Optimization of culture conditions for production of protease from Bacillus megaterium

Journal of Ecobiotechnology. 2:4, 40-46 (October 2010)
R. Rajkumar, K.R. Jayappriyan, P. Ramesh Kannan, and R. Rengasamy

2. Discrimination between the morphological and molecular identification in the genus Dunaliella

International Journal of Current Research. 8, 73–78 (September 2010)
K.R. Jayappriyan, R. Rajkumar, S. Nagaraj, S. Divya, and R. Rengasamy

3. Significance of 18S rDNA specific primers in the identification of genus Dunaliella

Journal of Experimental Sciences. 1:1, 27–31 (August 2010)
K.R. Jayappriyan, R. Rajkumar, P. Ramesh Kannan, S. Divya, and R. Rengasamy

Dr R RAJKUMAR , Assistant Professor , Department of Environmental Sciences

4. Optimization study in Dunaliella salina EU5891200 isolated in salt pans of Tamil Nadu, South India

Recent Research in Science and Technology. 2:4, 54-62 (July 2010)
K.R. Jayappriyan, R. Rajkumar, L. Sheeja, S. Divya, and R. Rengasamy