

Personal Details

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Summary

I have been working in the field of **Microalgal Biorefinery for biofuels and bioproducts** for the past **12 years at academic and industrial level**. During my research period, I have extensively worked on marine and freshwater microalgal species at large scale cultivation through open raceway pond and closed photobioreactor (PBR). I have experience in growing microalgae at zero nutrients cost technology using various wastewater (Municipal, Industrial, and agricultural waste). Also, I am expertise in microalgae biomass production at commercial level for biofuels and high value-added bioproducts. In addition, I had excellent **experienced in thermochemical techniques, torrefaction, biochar synthesis, CO₂ mitigation, metallic iron production using microalgal biochar**. I have published more than **45 peer-reviewed international journal articles and 2 book chapters**. I was appointed as a Guest Editor for Environmental Technology & Innovation (Elsevier) (Q1, Impact factor- 3.4) in 2020. Also, I served as an associate editor, reviewers, and editorial board member in scientific journals.

I have published a number of SCI indexed research papers in this area. For the research and development, I have collaborated with many overseas institutions, namely **universities in Taiwan, South Korea, China, Norway, Malaysia, India, Thailand, and Vietnam**. In these periods, as a co-supervisor, I have supervised 15 postgraduate students, and 5 M.Phil., and PhD students. My career goal is to further development as an expert in the field of Microalgal biorefinery and ultimately become an established Researcher professor.

Education

- **Ph. D.**, in Algal Bioenergy, at University of Madras, Chennai, India. Ph.D.-Thesis - *Isolation and mass cultivation of Microalgae Botryococcus braunii Kütz. Under open raceway pond for biofuels production* (August 2013).
- **M. Phil.**, in Biotechnology, Periyar University, Salem, India (2009). Thesis- *Molecular Characterization and β -carotene production from Dunaliella salina* (July 2008)
- **M. Sc.**, in Plant Biotechnology, Bharathidasan University, Trichy, India (2005).

Professional Experience in academia

- **Research Professor:**
Department of Chemical Technology, Chulalongkorn University, Thailand (July 2018 – till date).
- **Postdoctoral Researcher:**
Research field: Large scale cultivation of Microalgae using domestic wastewater, Thermochemical Liquefaction, Torrefaction, Pyrolysis, Biochar Production, Metallic iron conversion using algal biochar. *Department of Aeronautics and Astronautics, National Cheng Kung University, Taiwan* (Jun 2017- Jun 2018)
- **Visiting Researcher:**
Research field: Thermochemical Liquefaction, Torrefaction, Pyrolysis, microalgae largescale cultivation. *Ton Duc Thang University, Ho Chi Minh City, Vietnam* (2018 – 2019)

- **Postdoctoral Research Scientist:**
Research field: Microalgae cultivation at commercial scale for biofuels (biodiesel and bioethanol) production using wastewater resource, thermochemical liquefaction, pyrolysis. **Department of Mechanical Engineering, University Technology Malaysia, Johor, Malaysia** (Dec 2014 - Jan 2017).
- **Visiting Researcher:**
Research field: Microalgae cultivation at open raceway and low cost Photobioreactor (PBR) for biofuels production. SQC., Pvt., Ltd., Australia, **Department of Chemical Engineering, Adelaide University, Australia** (March 2011)
- **Visiting Researcher: (Marie Curie Fellowship scheme)**
University of Stavanger, Norway. April – May 2019

Professional Experience in industry

- **Senior Research Fellow:**
Research area: Large Scale cultivation of fresh and marine microalgal species in Open and Closed (PBR) system for biofuels (biodiesel, bioethanol) production, Thermochemical crude oil extraction, bioproducts. **Aban Pvt., Ltd., Chennai, India & SQC Pvt., Ltd., Australia** (Sept 2010 – March 2013)
- **Research Scientist:**
Research area: Microalgae cultivation at commercial scale (500 m²/ Open raceway pond capacity 100,000 L) for biofuels production, Thermochemical Liquefaction for crude oil extraction. **Reliance Industries Pvt., Ltd., Mumbai, India** (April 2013 to Dec 2013).

Supervising and mentoring


Co-supervision/tutoring of 2 doctoral and 5 master student projects related to similar scientific problems.

Membership in Scientific Society

- ✚ **Managing Guest Editor-JOURNAL OF BIOTECHNOLOGY (Elsevier), Impact Factor-3.51**
- ✚ **Guest Editor- ENVIRONMENTAL TECHNOLOGY AND INNOVATION (Elsevier) - Impact factor 3.4**
- ✚ **Associate Editor:** Renewable & Sustainable Energy (*Bioinfo Publications*)
- ✚ **Reviewer in SCI indexed Journals:**
Bioresource Technology; Energy Conversion and Managements, Applied energy, Energy, etc., American Chemical Society (ACS) journals
Springer Journals.
- ✚ **Editorial Board Member:**
Science Publishing Journals and Conferences- India
Science Publishing Group (Inter. Journal of Sustainable and Green Energy) - USA.
- ✚ **World Bioenergy Association Member**

Fellowship awarded

- ✚ Junior Research Fellowship (JRF) Aban Industries Pvt., Ltd., Chennai, India
- ✚ Indo-Australian Senior Research Fellowship (I-A SRF) Funded by Aban Industries Pvt., Ltd., Chennai, India & SQC, Pvt., Ltd, Australia- **Commercial cultivation of microalgae in open raceway pond and PBR for biofuels production**
- ✚ University Technology Malaysia- postdoctoral fellowship award 2014, 2015, 2016 -**Microalgae cultivation for bio-oil production through Thermochemical process-large scale**

 Thailand Research Fellow (TRF)- International Research Network (IRN)- *For large scale development of microalgal biofuels & bioproducts*

Awards

- **Elsevier Reviewer Recognition Award:** I have reviewed more than 30 SCI Journals
- **Bronze Medal- INATEX-2015, UTM Malaysia:** 17th Industrial Art and Technology Exhibition (INATEX 2015) held at University Technology Malaysia, **Malaysia**
- **Indra Gandhi Samaj Ratna - New Delhi, India**

Teaching Experience:

Subjects taught for under and postgraduate students: Algal biotechnology; Biofuels; Energy and Environmental science and engineering; Plant-biochemistry and microbiology

I hereby declare that the above information is true and correct to the best of my knowledge

Signature

(Dr. V. ASHOK KUMAR)