

**Name** : Dr. Prabhu Thangadurai

**Designation** : Assistant Professor

**Department** : Biotechnology

**Qualification** : Ph.D

**Experience** : Teaching -6 Years (Amity University (3) PSG College of Technology (3))

**Research** : Post doctoral fellow – 4.5 Years (IIT Bombay (1), IIT Delhi (1), IIT Madras (2.5))

**Area of Specialization(s)** : Applied Materials & Interfaces, Sustainable Chemistry & Engineering

**Email (Official I.D.)** : prabhuthangadurai@psgrkcw.ac.in



#### Academic Qualifications

Degree	Branch	Institution/University Name	Year of Graduation
Ph.D.	Environmental Science & Engineering	IIT BOMBAY	July 2007 – May 2013
M. Sc.	Environmental Science	CEG, ANNA UNIVERSITY	July 2004 – July 2006
B.Sc.	Microbiology	BHARATHIAR UNIVERSITY	June 2001 – May 2004

#### Research Guidance

Programme	No. of Scholars	
	Completed	Pursuing
Ph.D	0	1

#### Selected Research Publications (Indexed)

1. Sharma, R. D., & Thangadurai, P. (2026). Chitin from *Hermetia illucens* exuviae: A sustainable biopolymer yielding composition-defined functional oligomers with antioxidant cytoprotection. *International Journal of Biological Macromolecules*, 337, 149453. <https://doi.org/10.1016/j.ijbiomac.2025.149453>
2. Sharma, R. D., & Thangadurai, P. (2026). Single-enclosure black soldier fly system for decentralized conversion of mixed organic residues into feed-grade larvae and stabilized frass. *Biocatalysis and Agricultural Biotechnology*, 71, 103905. <https://doi.org/10.1016/j.bcab.2025.103905>

3. Sharma, R. D., & Thangadurai, P. (2025). Sustainable bioprocessing of *Hermetia illucens* exuviae into structurally defined chitooligosaccharides within a circular biorefinery framework. *Bioresource Technology Reports*, 32, 102400. <https://doi.org/10.1016/j.biiteb.2025.102400>
4. Sharma, R., & Thangadurai, P. (2023). Palladium-based catalytic treatment and a rhizobacterial-assisted detoxification for the enhanced removal of lindane. *Nature Environment and Pollution Technology*, 22(4), 1881–1890. <https://doi.org/10.46488/NEPT.2023.v22i04.015>
5. Tyagi, N., Thangadurai, P., & Suresh, S. (2020). Application of bacterial cellulose–silver nanoprism composite for detoxification of endosulfan and inactivation of *Escherichia coli* cells. *International Journal of Environmental Science and Technology*, 17(3), 1713–1726. <https://doi.org/10.1007/s13762-019-02510-4>
6. Suresh, S., & Thangadurai, P. (2019). Coupling of zero-valent magnesium or magnesium–palladium-mediated reductive transformation to bacterial oxidation for elimination of endosulfan. *International Journal of Environmental Science and Technology*, 16(3), 1421–1432. <https://doi.org/10.1007/s13762-018-1748-1>
7. Divyapriya, G., Thangadurai, P., & Nambi, I. (2018). Green approach to produce a graphene thin film on a conductive lcd matrix for the oxidative transformation of ciprofloxacin. *ACS Sustainable Chemistry & Engineering*, 6(3), 3453–3462. <https://doi.org/10.1021/acssuschemeng.7b03687>
8. Thangadurai, P., & Suresh, S. (2014). Biodegradation of endosulfan by soil bacterial cultures. *International Biodeterioration & Biodegradation*, 94, 38–47. <https://doi.org/10.1016/j.ibiod.2014.06.017>
9. Thangadurai, P., & Suresh, S. (2013). Reductive transformation of endosulfan in aqueous phase using magnesium–palladium bimetallic systems: A comparative study. *Journal of Hazardous Materials*, 246–247, 245–256. <https://doi.org/10.1016/j.jhazmat.2012.12.031>

#### Paper Presentations in Conference (selected)

1. Prabhu Thangadurai and Rachana Sharma (2022). Pd-based catalytic treatment and a rhizobacterial assisted detoxification for the enhanced removal of lindane. IWA World Water Congress & Exhibition held on 11<sup>th</sup> to 16<sup>th</sup> September 2022 (oral presentation), Copenhagen, **Denmark**.
2. Prabhu Thangadurai (2019). Pd–Cu dual-atom catalysts on N-doped carbon for N<sub>2</sub>-selective electrocatalytic nitrate reduction in groundwater. WEFTEC 2019 (Water Environment Federation Technical Exhibition and Conference) held on 21<sup>st</sup> September to 25<sup>th</sup> September (oral presentation) at Chicago, Illinois, **USA**.
3. Prabhu Thangadurai (2018). Assessing impacts of sand mining on water quality and design of wastewater purification system. IWA World Water Congress & Exhibition held on 16<sup>th</sup> September to 21<sup>st</sup> September (oral presentation) at Tokyo, **Japan**.
4. Prabhu Thangadurai and Sumathi Suresh (2017). Sustainable mixotrophic microalgae cultivation from industrial wastes for carbon credit, bioremediation, and lucrative biofuels. 14th IWA Leading Edge Conference on Water and Wastewater Technologies held on 29<sup>th</sup> May to 2<sup>nd</sup> June 2017 (oral presentation), Florianopolis, **Brazil**.
5. Prabhu Thangadurai and Sumathi Suresh (2016). Coupling of Mg<sup>0</sup>/Pd<sup>0</sup> mediated reduction and bacterial oxidation for detoxification of endosulfan. IWA World Water Congress & Exhibition held on 8<sup>th</sup> to 13<sup>th</sup> October 2016 (oral presentation), Brisbane, Queensland, **Australia**.
6. Prabhu Thangadurai and Sumathi Suresh (2011). Dechlorination of endosulfan using metal mediated systems. 12th International Conference on Environmental Science and Technology held on 8<sup>th</sup> to 10<sup>th</sup> Sep 2011 (oral presentation) at Rhodes, **Greece**.

7. Prabhu Thangadurai and Sumathi Suresh, Biodegradation of endosulfan by Agrobacterium tumefaciens PT-3. International Exhibition and Conference on Water Technologies, Environmental Technologies, and Renewable Energy held on 13<sup>th</sup> to 14<sup>th</sup> February 2013 (oral presentation) at Mumbai, India.

### **Honors, Awards & Fellowships**

GATE Qualified (2x): 2007 (Environmental Engg.) 98.91 percentile; 2010 (Life Sciences) 97.70 percentile  
Excellence-in-Research Fellowship, IIT Bombay  
Best Research Publication Award, IIT Bombay  
CSIR Postdoctoral Fellowship (2014)

### **Industrial Consultancy (current)**

ITC ICML  
Coal India  
Hindalco  
Tata Sustainability Group  
UPL

### **International Collaborations (current)**

Norwegian University of Science and Technology (NTNU), Norway  
Stockholm Resilience Centre, Sweden  
Swiss Federal Institute of Aquatic Science and Technology (Eawag), Switzerland  
University of Florida, USA  
MIT Sloan School of Management, USA

### **Professional Affiliations**

Fellow, Geological Society of India  
Member, Society for Environmental Toxicology and Chemistry (SETAC)  
Member, Society for Applied Microbiology (International)  
Member, International Water Association (IWA) (International)  
Member, Air and Water Management Association (AWMA) (International)

### **Indexing**

H-Index = 5