

# Faculty Profile



**Dr. P. Muthu Pandian , M.Sc., M. Phil., Ph.D**

Assistant Professor - Chemistry

## **HIGHLIGHTS:**

- Number of Journal Publications: 15
- H-Index: 4
- Project Funding Received: Nil
- Patents Published: 5
- Patents Granted: Nil

## **PROFESSIONAL LINKS:**

- Scopus ID: 58777953000
- Scopus Link: <https://www.scopus.com/authid/detail.uri?authorId=58777953000>
- Google Scholar ID:
- Anna University Faculty ID: 278975
- AICTE Faculty ID: 1-10775682994
- Anna University Supervisor ID: Nil
- LinkedIn: Nil

## **PROFESSIONAL BACKGROUND:**

- Teaching Experience till date: 7 years
- Industrial Experience: Nil

## **INTERNATIONAL EXPOSURE: Nil**

## **AREA OF SPECIALIZATION:**

- Energy Storage Devices
- Photo catalytic Degradation
- Solar Cells
- Organic Synthesis

## **Ph.Ds AWARDED WITH DETAILS:**

S:No	Name of Scholar	Title of Thesis	Year of Completion	Full Time/Part Time

## Ph.Ds GUIDING:

- **Full Time Scholars: Nil**
- **Part Time Scholars : Nil**

## PATENTS PUBLISHED/GRANTED:

- XXXXX
- YYYYY
- ZZZZZZ.
- CCCCC

## PAPERS PUBLISHED

1. **Muthu Pandian, P & Pandurangan, A** 2019, ‘Copper nanoparticles anchored onto boron-doped graphene nanosheets for use as a high performance asymmetric solid-state supercapacitor’, *Journal of RSC advances*, vol. 9 no. 6, pp. 3443-3461 (Annexure I, **Impact Factor: 3.361**).
2. **Muthu Pandian, P & Pandurangan, A** 2021, ‘Flexible asymmetric solid-state supercapacitor of boron doped reduced graphene for high energy density and power density in energy storage devices’ *Journal of Diamonds and Related materials*, vol. 118, pp 108495 (Annexure I, **Impact Factor: 3.315**).
3. **Muthu Pandian, P & Pandurangan, A** 2021, ‘Enhanced electrostatic potential with high energy and power density of symmetric and asymmetric solid-state supercapacitor of boron and nitrogen co-doped reduced graphene nanosheet for energy storage device’ *New Journal of Chemistry*, In press (Annexure I, **Impact Factor: 3.51**).
4. Ashraf, Mohd Shaikhul, **P. Muthu Pandian**, Anil Kumar, and A. Indira Priyadarsini. "Pharmacobotanical Investigation on Latex of Manilkara Zapota Plant: Extraction, Characterization, and Applications." *Annals of Forest Research* 65, no. 1 (2022): 3212-3223.
5. N. K. Anushkannan, G. H. Balde, D. Suganthi, **P. M. Pandian**, B. Kaur and K. V. D. Sagar, "A Novel Method for Categorizing Brain Tumors using the Hybrid ALO-ELM Model," *2023 7th International Conference on Trends in Electronics and Informatics (ICOEI)*, Tirunelveli, India, 2023, pp. 1467-1472, doi: 10.1109/ICOEI56765.2023.10125907.
6. Albert, H.M., Priya, R., **Pandian, P.M.** *et al.* Crystallization, structural, dielectric, mechanical, and SHG studies of L-histidine glutarate monohydrate crystal for nonlinear optical device applications. *J Mater Sci: Mater Electron* **34**, 1822 (2023). <https://doi.org/10.1007/s10854-023-11238-4>.
7. Pradosh Kumar Sharma, D. Arul Kumar, P. William, D. Obulesu, **P. Muthu Pandian**, Tasneem K.H. Khan, G. Manikandan, Energy storage system based on hybrid wind and photovoltaic technologies, *Measurement: Sensors*, Volume 30, 2023, 100915, ISSN 2665-9174, <https://doi.org/10.1016/j.measen.2023.100915>.

8. Ranjith Kumar, G., Nassa, V.K., Manikandan, K., Suribabu, P., **Pandian, P.M.**, Acharjee, P.B. (2024). Harnessing Medical Databases and Data Mining in the Big Data Era: Advancements and Applications in Healthcare. In: Yadav, S., Arora, P.K., Sharma, A.K., Kumar, H. (eds) Proceedings of Third International Conference in Mechanical and Energy Technology. ICMET 2023. Smart Innovation, Systems and Technologies, vol 390. Springer, Singapore. [https://doi.org/10.1007/978-981-97-2716-2\\_15](https://doi.org/10.1007/978-981-97-2716-2_15)
9. Malathy, V., Pasupulla, A.P., Srivastava, D., Hymavathi, J., **Pandian, P.M.**, Acharjee, P.B. (2024). Revolutionising Tumour Diagnosis: How Clinical Application of Artificial Intelligence and Machine Learning Enhances Accuracy and Efficiency. In: Yadav, S., Arora, P.K., Sharma, A.K., Kumar, H. (eds) Proceedings of Third International Conference in Mechanical and Energy Technology. ICMET 2023. Smart Innovation, Systems and Technologies, vol 390. Springer, Singapore. [https://doi.org/10.1007/978-981-97-2716-2\\_14](https://doi.org/10.1007/978-981-97-2716-2_14)
10. Upadhyay, Viyat & Singh, Dhiraj & Singh, Rahul & Verma, Rajesh & Srivastava, Arun & **Pandian, P.** & Srivastava, Amit. (2024). Developing Functional Fabrics with Nano-Metal Coatings for Multiple uses by Investigating their Electromagnetic and Ultraviolet Properties. Journal of Nano- and Electronic Physics. 16. 03024-1. 10.21272/jnep.16(3).03024.
11. Serverless Data Processing System and its Design Space Consideration Arockia Raj A, Kakoli Banerjee, A Anist, G N Beena Bethel, **P Muthu Pandian**, Purnendu Bikash Acharjee International Research Journal of Multidisciplinary Scope (IRJMS), 2024; 5(4):641-650, DOI: 10.47857/irjms.2024.v05i04.01194
12. Enhancing Sustainability and Energy Efficiency in Wireless Communication Systems Through Integrated Renewable-Powered Antenna Design, G. Santhakumar, R. Muthukumar, M. Ramkumar Prabhu, Davinder Kumar, S. Murugesan, **P. Muthu Pandian**, V. Bhooopathy, Journal of Environmental Protection and Ecology 25, No 6, 1956–1968 (2024).

#### **COURSES CERTIFIED:**

- Successfully completed the twelve month course of “Analytical Chemistry” in NPTEL.

#### **ACHIEVEMENTS AND AWARDS : Nil**

#### **SPECIAL SESSIONS DELIVERED:**

- Delivered a Guest Lecture on "**An overview of conventional Energy Resources and Emerging options for Sustainability**", on 26th April 2024 in Jerusalem College of Engineering, Pallikaranai.

#### **CONFERENCES/SEMINARS/WORKSHOPS ATTENDED:**

##### **International Conference: (Papers presented)**

- **Muthu Pandian Paramasivan & Pandurangan Arumugam** 2016, ‘Boron doped graphene oxide for the purpose of supercapacitor and photocatalytic degradation of dyes’, International Conference of Functional Material (ICFM-2016), September 7-10, Centre for Scientific and Applied Research PSN college of engineering and technology, Melathediyoar, Tirunelveli 627 152, Tamil Nadu, India. **(Poster presentation)**

## National Conference:

- **Muthu Pandian Paramasivan & Pandurangan Arumugam 2017**, ‘Synthesis of boron-doped graphene oxide by chemical vapor deposition and its properties’, National conference on Nanostructured Materials (CNG-NCNN’17), School of Chemical Science Auditorium, University of Madras, Guindy Campus, Chennai during 7-8 February 2017. **(Poster presentation)**
- **Muthu Pandian Paramasivan & Pandurangan Arumugam 2017**, ‘Electrochemical behaviour of Boron doped graphene oxide by chemical vapor deposition’, Seminar on Current Trends in Carbon materials (IICS-BC & CTC), Indian carbon society, Bengaluru Chapter, April 8<sup>th</sup>, held at AeSI, Bengaluru, India. **(Poster presentation)**
- DST-PURSE Sponsored Two day national workshop on **“Advance Characterization Techniques of Materials”** organized by Department of Mechanical Engineering, Anna University, Chennai, India during 23-24 February 2015.
- One day Springer **“Author workshop”** jointly organized by springer and Anna University on 2nd November 2015.
- National workshop on **“Research for Resurgence”** jointly organized by Centre for research, Anna University, Chennai & RFRF foundation, Nagpur on 13 March 2018
- Conference on **“Industry - Academia - R & D Ecosystem”** organized by International Centre for Research Facilitation and Training (ICRFT), Anna University, Chennai, during 26-27 February 2018.
- **“Two Day Workshop on AFM, MFM, EFM, KPFM, STM, & PFM”** organized by Crystal Growth Centre, Anna University, Chennai India conducted by Park systems & ICON Analytical Equipment Pvt. Ltd, during August 10 & 11, 2017.
- National seminar on **“Recent Advances in Nanoscience and Technology (Nanomeet 2016)”** organized by Centre for Nanoscience and Nanotechnology, Anna University, Chennai, during 6-7 October 2016.
- UGC (India) & SIU (Norway) sponsored, **“International Conference on Advances in Functional Materials (ICAFM 2017)”** jointly organized by Central University, Tiruvarur, Anna University, Chennai, India and University of Oslo, Norway, during 6-8 January 2017.
- UGC-SAP (DRSIII) sponsored One day seminar on **“Recent Trends in Catalysis”** organized by Department of Chemistry, Anna University, Chennai, on 28 March 2017.
- One day regional Training programme on **“URKUND-An Anti-Plagiarism Detection Tool”** jointly organized by INFLIBNET and Anna University, Chennai on 22 September 2015.
- One day national seminar on **“Polymer Processing and Its Application to Packaging Using Nanomaterials”** organized by Department of printing Technology, Anna University, Chennai on 02 November 2015.
- Third International workshop on **“Advanced functional material”** (TIWAN-2015) jointly organized by Centre for Nanoscience and Nanotechnology & Centre for international Affairs during 16-18 December 2015.
- DST-PURSE sponsored **“International workshop on Recent Materials for healthcare and industrial applications (IWRM-2018)”** jointly organized by

Department of Medical Physics, Department of Chemistry and Crystal Growth Centre, Anna University, Chennai, during 22-23 January 2018.

- DST-PURSE sponsored One day national conference on “**Sustainable materials for Energy and Environmental Applications**” (SMEEA-19) organized by Department of Chemistry, Anna University, Chennai on 02 March 2019.

**PROFESSIONAL MEMBERSHIPS:**

- International Association of Engineers (IAENG)
- IQAC Cluster (IC-1311)
- Commonwealth Chemistry
- Chinese Chemical Society (CCS)