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## List of Publications

### I. Journals:

1. **Prakash, O.**<sup>\*</sup>, Mhatre, A. M., Tripathi, R., Pandey, A. K., Yadav, P. K., Khan, S. A., & Maiti, P. (2020). Fabrication of Conducting Nanochannels Using Accelerator for Fuel Cell Membrane and Removal of Radionuclides: Role of Nanoparticles. *ACS Applied Materials & Interfaces*, 12(15), 17628-17640. (Highlights Nature India).
2. Singh, B., **Prakash, O.**, Maiti, P., & Indra, A. (2020). Electrochemical Transformation of Metal Organic Framework into Ultrathin Metal Hydroxide-(oxy) hydroxide Nanosheets for Alkaline Water Oxidation. *ACS Applied Nano Materials*, 3(7), 6693-6701.
3. Daripa, S., Singh, V. K., **Prakash, O.**, Maiti, P., Kuila, B. K., & Das, S. (2020). Sulfonated graphene-modified electrodes for enhanced capacitive performance and improved electro-oxidation of hydrogen peroxide. *Nano-Structures & Nano-Objects*, 24, 100531.
4. Bhattacharyya, R., **Prakash, O.**, Roy, S., Singh, A. P., Bhattacharya, T. K., Maiti, P., & Das, S. (2019). Graphene oxide-ferrite hybrid framework as enhanced broadband absorption in gigahertz frequencies. *Scientific Reports*, 9(1), 1-12.
5. Bhattacharyya, R., Roy, S., **Prakash, O.**, Singh, A. P., Bhattacharya, T. K., Maiti, P., & Das, S. (2019). Mg<sub>0.5</sub>Zn<sub>0.5</sub>Fe<sub>2</sub>O<sub>4</sub>-polyurethane thin nanocomposites coating as broadband microwave absorber. *SN Applied Sciences*, 1(1), 38.

6. **Prakash, O.** <sup>\*</sup>, Jana, K. K., Manohar, M., Shahi, V. K., Khan, S. A., Avasthi, D., & Maiti, P. (2019). Fabrication of a low-cost functionalized poly (vinylidene fluoride) nanohybrid membrane for superior fuel cells. *Sustainable Energy & Fuels*, 3(5), 1269-1282.
7. **Prakash, O.** <sup>\*</sup>, Jana, K. K., Jain, R., Shah, P., Manohar, M., Shahi, V. K., & Maiti, P. (2018). Functionalized poly (vinylidene fluoride-co-hexafluoride propylene) membrane for fuel cell. *Polymer*, 151, 261-268.
8. Kumar, S., Maurya, I. C., **Prakash, O.**, Srivastava, P., Das, S., & Maiti, P. (2018). Functionalized thermoplastic polyurethane as hole conductor for quantum dot-sensitized solar cell. *ACS Applied Energy Materials*, 1(9), 4641-4650.
9. Jana, K. K., **Prakash, O.**, Shahi, V. K., Avasthi, D. K., & Maiti, P. (2018). Poly (vinylidene fluoride-co-chlorotrifluoro ethylene) Nanohybrid Membrane for Fuel Cell. *ACS omega*, 3(1), 917-928.
10. Baghendra Singh, **Om Prakash**, Pralay Maiti, and Arindam Indra, (2020). A Facile Strategy to Avail Alkaline Overall Water Splitting with Self-Supported Prussian blue Analogues. *Chem. Commun.*, 2020, **56**, 15036-15039.
11. Akhand Pratap Singh, **Om Prakash**, Sunil Kumar, Aparna Shukla, and Pralay Maiti, Poly(lactic acid-co-glycolic acid) as Sustained Drug Delivery Vehicle for Melanoma Therapy. **(Communicated)**
12. **Om Prakash** <sup>\*</sup> Amol M. Mhatre, Rahul Tripathi, Ashok K. Pandey, Pravesh K. Yadav and Pralay Maiti. Lithium Irradiated Poly (vinylidene fluoride) Nanohybrid Membrane for Radionuclide Waste Management and Tracing **(Accepted)**.

13. Pravesh Kumar Yadav; **Om Prakash**; Biswajit Ray; Pralay Maiti Functionalized Polythiophene for Corrosion Inhibition and Photovoltaic Application. (*Accepted*)
14. Om Prakash, Shivam Tiwari and Pralay Maiti, Modified poly (vinylidene difluoride) and its nanocomposites for the energy applications: A Review(*Communicated*)
15. Baghendra Singh, **Om Prakash**, Pralay Maiti, and Arindam Indra, Cyanide Vacancy Assisted Electrochemical transformation Prussian blue Analogue for alkaline water oxidation.(*Communicated*)
16. **Om Prakash**, Shyam Bihari, Keshav, Shivam Tiwari, Ravi Prakash and Pralay Maiti, Dehydro-halogenated poly (vinylidene fluoride) based anion exchange membrane for Fuel cell applications.(*Communicated*)

**Note:** \*indicate publications for thesis Chapters.

## **II. Conference Papers:**

17. Bhattacharyya, R., Gupta, A., **Prakash, O.**, Roy, S., Bhattacharyya, T. K., Maiti, P., & Das, S. (2019, March). In-situ synthesis of (Mg<sub>0.5</sub> Zn<sub>0.5</sub>) Fe<sub>2</sub> O<sub>4</sub>-graphene oxide nanocomposites for broadband microwave absorption in GHz frequency range. In *2019 URSI Asia-Pacific Radio Science Conference (AP-RASC)* (pp. 1-4). *IEEE*.
18. Bhattacharyya, R., Jha, D. K., **Prakash, O.**, Singh, A. P., Bhattacharyya, S., & Das, S. (2017, December). Ultra-thin ferrite nanocomposites coating as broadband microwave absorber. In *2017 IEEE applied electromagnetic conference (AEMC)* (pp. 1-2) *IEEE*.

**Book Chapter:**

1. **Om Prakash** and Pralay Maiti, Functionalized Fluoropolymer membrane for Fuel cell applications. *Springer Nature Publisher*.

**Patents:**

1. Pralay Maiti, **Om Prakash**, Amole M. Mhatre, Rahul Tripathi and Ashok Kumar Pandey; Development of Functional porous polymeric membrane using accelerator for separation of f-block elements; Indian Patent Application No. *202011023201* filed on June 02, 2020.
2. Pralay Maiti and Om Prakash; A Method to enhance thermal Stability and Efficiency in Porous Fluoropolymer Hybrid Membrane; Indian Patent Application No. *201711027183* filed on July 31, 2017.

**Conferences:**

1. 2<sup>nd</sup> Indian Materials Conclave and 31<sup>st</sup> AGM at Kolkata -2020, **MRSI, Kolkata, India**.
2. National symposium on Contemporary Trends and Future Prospects of Functional Materials-2019, **Chemistry Department ,BHU –Varanasi ,Uttar Pradesh ,India**
3. Indo-German Joint Scientific workshop on membranes for water and Energy-2019, CSIR-CSMCRI, **Bhavnagar-Gujarat, India**.
4. 15<sup>th</sup> International Conference on Polymer Science and Technology-2018, **IISER and NCL –Pune, Maharashtra, India**.

5. Institute Day Presented Patent work-2018, **SMST IIT (BHU)-Varanasi, Uttar Pradesh, India.**
6. 45<sup>th</sup> National Seminar on Crystallographic -2017, **IIT (BHU) and INSA for IUCr-Varanasi, Uttar Pradesh, India.**
7. National conference on Recent Trends on membrane and Separation Technology-2017, CSIR-CSMCRI, **Bhavnagar-Gujarat, India.**