

**Title: Synthesis, Structure, Properties, Application, and Technological Aspects of Metal-Organic Frameworks**

**Section Editor: Dr. Rampal Pandey**

**Scope of the Thematic Issue:**

The advanced developments in the thrust areas of research in Metal-Organic Frameworks, such as heterogeneous catalysis, photocatalysis and electrocatalysis will be covered in this thematic issue.

**Keywords:**

i) Metal-Organic Framework ii) Preparation iii) Structure IV) Heterogeneous Catalysis v) Organic Transformations vi) Photo catalysis vii) Electro catalysis viii) Water splitting

**Sub-topics:**

The sub-topics to be covered within the issue should be provided:

- Synthetic & structural developments in the field of Metal-Organic Frameworks
- Structure-property relationships in Metal-Organic Frameworks
- Heterogeneous catalysis by Metal-Organic Frameworks for organic transformations
- Photocatalytic and electrocatalytic behavior of Metal-Organic Frameworks towards water splitting
- Metal-Organic Framework catalyzed CO<sub>2</sub> reduction

**Tentative titles of the articles**

1. Metal-Organic Frameworks (MOFs): An Introduction
2. Design, Synthetic methodologies and Preparation challenges for Metal-Organic Frameworks
3. Design, synthesis and properties of Zeolite-type-Metal–Organic Frameworks (ZMOFs)
4. A supermolecular building methodology for the design and preparation of Metal–Organic Frameworks
5. Structural aspects of transition metal and rare earth metal based Metal-Organic Frameworks
6. Metal–metalloporphyrin frameworks as functional materials
7. Proton conduction properties of Metal-Organic Frameworks
8. Metal-Organic Frameworks for gas storage and separations
9. Metal-Organic Frameworks for application in membrane technology
10. Metal-Organic Frameworks as heterogeneous and supramolecular catalysts
11. Metal-Organic Frameworks as electrocatalysts for oxygen evolution and hydrogen evaluation reactions
12. Electronic and optoelectronic devices containing Metal-Organic Frameworks
13. Metal-Organic Frameworks for fluorescent chemical detection
14. Metal-Organic Frameworks for capture and degradation of toxic chemicals and vapors
15. Photocatalytic applications of Metal-Organic Frameworks

**Schedule:**

- ✧ Thematic issue submission deadline: 31<sup>st</sup> March 2023

**Contacts:**

*Section Editor Name: **Dr. Rampal Pandey***

*Affiliation: Department of Chemistry, National Institute of Technology, Uttarakhand*

*Email: [rppandey@gmail.com](mailto:rppandey@gmail.com)*