

**TENTATIVE OUTLINE****Recent Advances for the Synthesis of Novel Ionic Liquids and New Organic-Inorganic Hybrid Catalysts and their Application for the Organic Reactions**

*Guest Editor: Professor Leila Zare Fekri PhD*

**Aims & Scope:**

Hybrids materials represent a new class of heterogeneous catalysts that combine the advantages of individual organic and inorganic components, allowing one to obtain solids with high mechanical, structural and hydrothermal stability together with the exhibility and functionality typical of organic molecules. The nature of the organic-inorganic interface, including the types of organic-inorganic interactions, the hydrophobic or hydrophilic surface character and the type of bonds plays a strong role in controlling the properties (electrical, optical, mechanical, separation capacity, catalysis, sensing capability, and chemical and thermal stability) of the hybrids.

Ionic liquids have emerged as an environmentally friendly alternative to the volatile organic solvents. Being designer solvents, they can be modulated to suit the reaction conditions, therefore earning the name "task specific ionic liquids." Though primarily used as solvents, they are now finding applications in various fields like catalysis, electrochemistry, spectroscopy, and material science to mention a few. The present review is aimed at exploring the applications of ionic liquids in catalysis as acid, base, and organocatalysts and as soluble supports for catalysts.

Nowadays, an increasing attraction was made for the synthesis of new generation of ionic liquids and organic-inorganic hybrid catalyst and their usage as catalyst in organic transformation.

In this issue, synthesis, characterization and application of new ionic liquids or organic-inorganic hybrid catalysts as review, mini-review or article will be published.

**Keywords:** Green chemistry, ionic liquid, organic-inorganic hybrid, organic synthesis.

**Sub-topics:**

The subtopics include but are not limited to the following:

- Synthesis and characterization of new organic-inorganic hybrid catalysts and materials
- Applications of these materials as catalysts in organic transformations
- Application of these materials for detection and elimination of pollutant

**Schedule:**

- ✧ Manuscript submission deadline: July 31, 2021
- ✧ Revision Due: September 30, 2021
- ✧ Announcement of acceptance by the Guest Editors: October.15, 2021
- ✧ Final manuscripts due: November 1, 2021

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