

Special Issue

Recent Developments on Ionic Liquids in Catalysis

Message from the Guest Editor

Ionic liquids are a class of compounds broadly described as salts that are liquids at ambient temperature and characterized by low vapor pressure and flammability and high thermal and electrochemical stability. Ionic liquids can be fine-tuned to possess the required properties by choosing suitable components from a wide range of available cations and anions. This allows for the design of ionic liquids to be either hydrophobic or hydrophilic, either protic or aprotic, and bearing Brønsted or Lewis acidity or both. All of these properties make ionic liquid particularly interesting for its application in catalysis as a green solvent (as an alternative to volatile organic compounds (VOCs)), as a catalyst, or both. To date, ionic liquids have been successfully applied in dozens of chemical reactions, including oxidation, alkylation, acylation, esterification, hydrogenation, oligomerization, and polymerization. Additionally, the successful commercial application of ionic liquids in processes such as BASIL, Hycapure Hg, and IsoAlky inspires continuous research in this field.

Guest Editor

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