



New Trends of Ionic Liquids Design and Their Applications in Catalysis

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Message from the Guest Editor

During the past few decades, ionic liquids (ILs) were rapidly developed and utilized as green solvents and catalysts. Specifically, the melting points, polarity, affinity, etc., could be precisely controlled by tuning the cations and anions. Meanwhile, the appropriate catalytic sites could also be incorporated to promote the proceedings of the required reactions. In view of catalytic features, a flexible designability and tunability enable reactions involving ILs to be advantageous in both homogeneous and heterogeneous catalysis. For example, the compatibility of reactants and ILs can be adjusted by tuning the structures of ILs, thus creating a homogeneous condition for the catalysis. Once the reactions are completed, the products and ILs can be conveniently separated by extraction or distillation, which benefits from the low vapor pressure and polarity of the designed ILs. This is a Special Issue on new trends of ionic liquids design and their applications in catalysis. We hope to compile a set of manuscripts that inform the field of the state-of-the-art in catalysis.

