

Characteristics of ILs and Their Applications

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There is rapidly growing worldwide scientific and industrial interest in ionic liquids (ILs) over the past years. ILs are organic salts composed entirely of ions, with melting points below 100° C. Interest in ILs stems from their potential as 'green solvents'. Specifically, their non-volatile character and thermal stability make them attractive alternatives for conventional volatile organic solvents. Owing to their associated synthetic flexibility, ILs are also referred to as 'designer solvents'. There are at least a million simple ILs possible, and a trillion (10^{18}) ILs mixtures which make possible to design and tune the solvents to improve existing reaction and separation systems or create new process for desired products. Therefore, the lecture will give an overview on ILs starting from unique properties of ILs to a broad range of applications where ILs bring significant improvements. Finally, current status of ILs technology in Korea will be presented including industry-academic-government collaborative R&D Projects for accelerating the development of ILs-utilizing processes.