



Solvent Extraction of Rare-Earth Elements with Ionic Liquids and Deep Eutectic Solvents

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Message from the Guest Editors

Dear Colleagues,

Lanthanides or so-called rare earth elements (REEs) have attracted much attention in the scientific community due to their increasing number of technological applications, especially those related to the low carbon economy, such as hybrid vehicles, electric vehicles, and wind turbines. Recovery from leached minerals and, more recently, from recycled technological wastes is carried out through solvent extraction (SX), where the purification of REEs is not straightforward and uses toxic solvents. In this sense, ionic liquids (ILs) are a novel and outstanding class of solvents which have been proposed for SX of metal ions due to their excellent properties, such as negligible vapor pressure, non-flammability, and wide solvating power, but also an increased performance (distribution ratios and selectivity) over toxic solvents, opening many opportunities for these solvents to be applied in the REE purification industry. However, recently, deep eutectic solvents (DES) have gained much attention due to their ability to keep the same green characteristics as ILs but with simpler, cheaper, and less toxic synthesis.





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Message from the Editor-in-Chief

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