Solvometallurgy for rare earths

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Solvometallurgy is the extraction of metals from ores, extractive waste, industrial process residues, production scrap and urban waste using non-aqueous solutions. Solvometallurgy differs from hydrometallurgy by the absence of a discrete water phase. In this lecture, the principles of solvometallurgy and its application to the extractive metallurgy of rare earths are presented. It is shown how rare earths can be recovered from end-of-life magnets and lamp phosphor waste by selective leaching with functionalised ionic liquids. Non-aqueous solvent extraction with two immiscible organic phases offers a great potential for the separation of mixtures of rare earths [1, 2].

References
