OAK RIDGE NATIONAL LABORATORY
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Membrane Solvent Extraction for Rare Earth Separations

Disclosure Number

201303187

Technology Summary

Membrane-based dispersion-free supported liquid membrane solvent extraction (MSX) for the separation, concentration and recovery of rare earth elements such as neodymium, europium, yttrium, terbium and dysprosium enables the process to operate in a single step delivering multistage performance as good as or exceeding conventional solvent extraction. Novel system design features overcome some of the stability issues caused by the gradual loss of organic solvent and extractant. MSX requires low energy and provides greater efficiency and process stability.

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