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[\[PDF \(302K\)\]](#) [\[References\]](#)**Uphill Transport of Rare-Earth Metals through a Highly Stable Supported Liquid Membrane Based on an Ionic Liquid**[Fukiko KUBOTA](#)<sup>1)</sup>, [Yousuke SHIMOBORI](#)<sup>1)</sup>, [Yusuke KOYANAGI](#)<sup>1)</sup>, [Kojiro SHIMOJO](#)<sup>2)</sup>, [Noriho KAMIYA](#)<sup>1)</sup> and [Masahiro GOTO](#)<sup>1)</sup>*1) Department of Applied Chemistry, Graduate School of Engineering, Kyushu University**2) Division of Environment and Radiation Science, Nuclear Science and Energy Directions, Japan Atomic Energy Agency***(Received January 29, 2010)****(Accepted February 9, 2010)**

We have developed a highly stable supported liquid membrane based on ionic liquids (ILs) for the separation of rare-earth metals, employing *N,N*-dioctyldiglycol amic acid as a mobile carrier. The quantitative transport of Y and Eu through the membrane was successfully attained, and separation from metal impurities, Zn, was efficiently accomplished. A membrane stable enough for long-term operation was constructible from imidazolium-based ILs having a longer alkyl chain, such as octyl or dodecyl groups in an imidazolium cation.

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