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Solvent extraction kinetics of silver with methyl ketonic *p*-tert-octylcalix[4]arene in the modified lewis cell technique

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The solvent extraction kinetics of silver with methyl ketonic *p*-tert-octylcalix [4] arene as a hydrophobic extractant has been studied using a modified Lewis cell system. The effects of parameters affecting the extraction efficiency such as stirring speed, temperature and silver concentration were investigated. The initial extraction efficiency was rapidly increased as the stirring speed increased to 170 rpm, then a plateau in the efficiency occurred, which represents the crossover point between diffusion and chemical reaction control at the liquid-liquid interface. The thermodynamic parameters indicated that the adsorption process was spontaneous and exothermic.

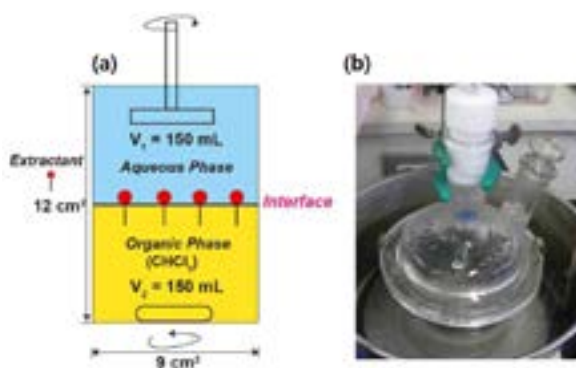


Figure 1: Schematic diagram of the modified Lewis cell (a) and its photo (b).

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Biography

Jee Young Kim has completed her PhD from Saga University, Japan in 2015 and Postdoctoral studies from Pusan National University, South Korea. Her research interest lies on interfacial behavior and solvent extraction kinetics with various types' calix [4] arene derivatives.

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