

### Ionic liquid-based CO<sub>2</sub> capture agents

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Carbon dioxide is considered as a greenhouse gas and a gaseous waste which its emissions from industrial process have to be controlled to slow down the global warming trend. Absorption and desorption of CO<sub>2</sub> in various ionic liquids(ILs) including ethylene diamine (EDA) based ILs ([EDA<sup>+</sup>H]CF<sub>3</sub>CO<sub>2</sub><sup>-</sup>, [EDA<sup>+</sup>H]CH<sub>3</sub>CO<sub>2</sub><sup>-</sup>), and 1,3-dimethylimidazolium methylphosphite ([DMIM]<sup>+</sup>MePHO<sub>3</sub><sup>-</sup>), were studied at 313.15 K. The diamine-based ILs showed higher CO<sub>2</sub> absorption and better recyclability than monoethanolamine-based chemical absorbents.