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Sequestration of carbon dioxide by mineral carbonation process using fly ash from lignite fluidized bed combustion

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Authors:	Manfred Jaschik, Krzysztof Warmuziński, Jolanta Jaschik
Journal information:	Prace Naukowe Instytutu Inżynierii Chemicznej Polskiej Akademii Nauk
Tags:	mineral carbonation, sequestration of co2, industrial waste, fly ash, precipitation, calcium carbonate

Abstract: The preliminary studies of indirect aqueous carbonation process using fly ash from lignite fluidized bed combustion are presented. Leachate after the dissolution of waste of pH=13 contained 0.0535 mol•l^{-1} of Ca^{+2}. The experimental research were conducted for a mixture of nitrogen and carbon dioxide, with about 13% of CO_2. After 9 minutes of conducting the process a 50 % conversion of calcium was attained, and almost 100% of carbon dioxide supplied to the reactor was captured.

Attachments:

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