

Quick mechanochemical reaction of CO₂ and silicate rocks

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CO₂ is found to be adsorbed quickly on mafic minerals by mechanochemical reaction. Various rocks and minerals are examined for their reactivity with CO₂. The silicates are crushed gently in a big ball mill with mixed gas of 10% CO₂ and 90% N₂. Residual gas is monitored by a gas-chromatograph. The 80% of CO₂ in the mill is found to react in 8 hours with olivine and peridotite. The quick reaction of CO₂ and fresh surface of peridotite is also expected in natural environments.

<ref.> Tanaka, T. and Mimura, K. (2013) Quick mechanochemical reaction of silicate rocks and CO₂. A possible candidate for ¹⁴C dating. In Summaries of Researches using AMS at Nagoya University XXIV. It will be published in March 2013 also will be opened in CiNii after 2014.

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