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# $CO_2$ Sequestration of real mine tailings by accelerated carbonation for CCUS technologies

**Ji-Whan Ahn, Thenepalli Thriveni** and **Seong Young Nam**
Korea Institute of Geoscience and Mineral Resources (KIGAM), South Korea

Recently, the global researchers focussed on $CO_2$ sequestration through mineral carbonation because of increasing severe atmospheric $CO_2$ levels that can be emitted from several resources and has lead to concerns about global warming. The possible emerging technology can contribute to the reduction of $CO_2$ emissions is $CO_2$ sequestration by mineral carbonation. Atmospheric $CO_2$ is sequestered with real mine tailings via accelerated carbonation of Mg-bearing minerals. The rate of carbon sequestration at some mine sites appears to be limited by the rate of $CO_2$ supply. If carbonation of bulk tailings were accelerated, large mines may have the capacity to sequester millions of tonnes of $CO_2$ annually, offsetting mine emissions. Some case studies, the possibilities for the integration of $CO_2$ mineral sequestration in real mine tailings by accelerated carbonation for $CO_2$ capture storage and utilization (CCUS) technologies will be presented.

ahnjw@kigam.re.kr