Processes and factors of generation of Mg-minerals in ordinary temperature hyperalkaline water

Mitsuhiro Ohzeko[1]; Tsutomu Sato[2]

[1] Life and Earth Sci.,Graduate, Kanazawa-U.; [2] Inst. Nature, Environ. Technol., Kanazawa Univ.

Ground water was derived form ultramafic rock, has hyperalkaline, great reductive, high Ca, low Si and Mg concentration. On the other, surface water has medium alkaline, oxic, high Mg and carbonate concentration. When these waters were mixed, silica-type hydrotalcite, blucite and hydromagnesite were generated. The veins considered that ground water was flowing, where Al-bearing serpentine and sepiorite was occured. In the Si-Mg-Al system, comprehension of reaction between ultramafic rock and fluid is important for global flux of elements.