# Dissolution of indented quartz and the depth of the geological wastes: preview

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We tentatively performed a dissolution experiment of indented quartz in H20 at moderate pressures and temperatures. The quartz was indented with a nano-indenter (RIDER, AKASHI) with a Bercovich diamond tip. The load is 9.8-98 mN. The dissolution test was performed in a vessel of a super-critical fluid generator (SCHOGER) up to temperature of up to 400 degrees centigrade and pressure of up to 40 MPa. The surface of the quartz before and after the SCHOGER test was observed with an atomic force microscope. We revealed that quartz can rapidly dissolve in the supercritical H2O, and that quartz also dissolves below the critical pressure at T=200 degrees centigrade. We suggest that the depth of the nuclear waste may be critical.