

On-site deposition and exposure experiments at a low-temperature hydrothermal area

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An on-site deposition and on-site adsorption experiments were carried out at a possible hydrothermal area in the Izu-Bonin arc, NW Pacific. The mineralogical and chemical analyses on the exposed glass, ceramics and on the artificial busserite samples suggested a new precipitation during 12 years and positive accumulation of some transitional metals. This finding was the first evidence of modern active precipitation of manganese oxide from normal sea water/ hydrothermal waters in the ocean floors.

Keywords: low-temperature hydrothermal activity, bayonaise hill, manganese mineral, busserite, todorokite, adsorption