

## Mineralogical studies on high-temperature volcanic sublimates from Iwodake volcano, Satsuma-Iwojima, Kyusyu southwestern Japan

# Eriko Nitta[1]; Mitsuyoshi Kimata[2]; Mihoko Hoshino[3]; Takuya Echigo[4]; Satoshi Hamasaki[5]; Hiroshi Shinohara[6]; Norimasa Nishida[7]; Tamao Hatta[8]; Masahiro Shimizu[9]

[1] Natural sci., Univ. of Tsukuba; [2] Institute of Geoscience, University of Tsukuba; [3] Earth Evolution Sci.-Univ. Tsukuba; [4] Earth Evolution, Life and Environmental, Univ. of Tsukuba; [5] G.S.J., AIST; [6] GSJ, AIST; [7] RFCST, Univ. of Tsukuba; [8] JIRCAS; [9] Earth Evolution Sci., Univ. Tsukuba

High-temperature volcanic sublimates, so-called 'molybdenum blue', from Iwodake volcano, satsuma-Iwojima, Kyusyu, southwestern Japan, were characterized by X-ray powder diffraction, X-ray micro-diffraction, Raman micro-scattering and electron microprobe analyses. The identified minerals are molybdenite, sphalerite, tugarinovite, molybdite, hematite, halite, sylvite, anglesite, wulfenite, quartz, tridymite and cristbalite. This description illustrates the first occurrences of tugarinovite and molybdite in Japan. Molybdenite and sphalerite in the present occurrence are exceedingly rich in Re (up to 7700 ppm) and In (up to 1.69 wt%), respectively, distinguished from those of a different origin by chemical composition.

Although the difference in the host rock arises between the Iwodake (rhyolite) and the Kudriavy (basaltic andesite) volcanoes, with minor deviations F and Cl contents in the former volcanic gases are roughly parallel to those in the latter one. Resultantly comparison of the sublimate minerals occurring in these two volcanoes emphasizes a general similarity between their high-temperature volcanic sublimates.