

## **Modern analogue of Kuroko deposit and hydrothermal experiments for artificial ore deposit on seafloor**

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We investigated the Kan-non-do Kuroko deposit in the Hokuroku Basin, Akita Prefecture, Japan to understand formation conditions of the Kuroko deposit as a modern analogue of hydrothermal vents on present seafloor. Based on mineral paragenesis of ore, the following formation conditions were obtained.

Kuroko (black ore): temperature 200-250C, log fS<sub>2</sub> -9.0 to -12.6, log fO<sub>2</sub> <-31.

Ohko (yellow ore) temperature 250-300C, log fS<sub>2</sub> -8.2 to -11.0, log fO<sub>2</sub> <-29.

We carried out hydrothermal experiment (autoclave experiment) to produce ore deposit. We could form chalcopyrite+galena+sphalerite assemblage after experiments, which shows micro scale similar texture of natural Kuro and Ohko deposits. According to the hydrothermal experiments, we can propose possible specification of anthropogenic ore deposits of hydrothermal vents on seafloor.