

## Formation of minerals by iron-oxidizing bacteria in hydrothermally altered area of Neogene period

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Formation of minerals by iron-oxidizing bacteria in the spring water of hydrothermally altered area was investigated. The altered rocks in this area contain smectite, rectorite, mica, and pyrite as alteration minerals. The spring water exhibits low pH, low Eh, and high concentration of Fe(II) and SO<sub>4</sub> due to oxidation of pyrite, and precipitation of Fe-minerals such as jarosite and ferrihydrite proceeds by bacterial oxidation of Fe(II). The formation of these minerals by iron-oxidizing bacteria was confirmed by incubation of the bacteria in liquid media containing Fe(II).