

Areal distribution of reddish water springs possibly related to active faults in Hanshin area, Kinki district, Japan

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Many reddish water springs have been found in and around Hanshin area, Kinki district. The red to orange color is due to colloidal ferric (Fe^{3+}) ion which is deposited as limonite where tufa is often found. We have been conducting areal survey of this reddish spring since 2003. ferric ion comes from the product of CO_2 -rock interaction (strong weathering). Here in Hanshin area, the CO_2 -bearing Arima-type thermal water upwells and exsolved CO_2 as bubbles further ascends to the shallow environment. Areal distribution shows that reddish springs often occur at active faults, indicating that CO_2 is ascending through the faults.

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