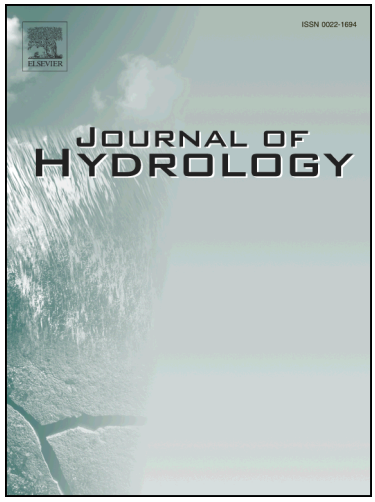

Research papers

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Vertical variability of arsenic concentrations under the control of iron-sulfur-arsenic interactions in reducing aquifer systems

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Abstract:

High spatial variability of arsenic (As) concentration in geogenic As-contaminated groundwater has been commonly observed worldwide, but the underlying reasons remain not well understood. Selecting a sulfate-containing, As-affected aquifer at the Datong Basin, northern China as the study area and combining hydrogeochemical investigation and sediment extraction with reactive transport modeling, this work elucidated the roles of Fe-S-As interactions in regulating the vertical variation of As concentration in the groundwater. Dissolved As concentration varied between 0.05 and 18 μmol/L, but generally increased in the depth of 20 – 25 m and then decreased