

Iron oxide formation by redox reaction and its developing process in geological formation

Hidekazu Yoshida[1]; Koshi Yamamoto[2]; Takeshi Naganuma[3]; Yuki Murakami[4]

[1] NUM; [2] Earth and Planetary Sci., Nagoya Univ.; [3] School of Biosphere Sci., Hiroshima Univ.; [4] JNC TGC

<http://www.num.nagoya-u.ac.jp/>

Redox reactions are inevitably identified in the geological formation wherever groundwater passes from oxidizing to reducing environment. It is also an important process for the geological waste isolation and its safety. Particularly, the redox reaction along the ground water conducting fracture and NF environment are considered to be influence the secondary elemental retardation by matrix diffusion. Here, we describe an analogous evidence that might be occurred in the NF environment around the underground waste cavern. Understanding such natural evidence would be a useful and practical example for the long-term effectiveness of the retardation analysis.