

B101-007

Room: 302

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Nitrate-reducing subsurface biosphere

Yohey Suzuki[1]; Takeshi Suko[1]; Naoto Takeno[1]; Kenji Nanba[2]; Urumu Tsunogai[3]; Kazumasa Ito[1]

[1] AIST; [2] Aquat Biosci, Tokyo Univ; [3] Fac. Sci., Hokkaido Univ.

It has long been believed that nitrate is one of minor electron acceptors in the deep subsurface. By drilling of 350-m-deep tertiary sedimentary rocks with deoxygenated and ultrafiltered fluid, we revealed that nitrate is present even at the depth of 350 m of an inland fore-arc basin, and that subsurface microbial populations are mainly composed of denitrifying bacteria. The geochemical and microbiological characteristics of the nitrate-reducing subsurface biosphere will be described.