
[JJ] Evening Poster | M (Multidisciplinary and Interdisciplinary) | M-ZZ Others

[M-ZZ41] Marine manganese deposits: from basic to applied sciences

convener: Akira Usui (Marine Core Research Center, Kochi University), Yoshio Takahashi (Department of Earth and Planetary Science, Graduate School of Science, The University of Tokyo), Katsuhiko Suzuki (国立研究開発法人海洋研究開発機構・海底資源研究開発センター, 共同), Takashi Ito (Faculty of Education, Ibaraki University)

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Marine manganese deposits include nodules and crusts of massive iron-manganese oxide aggregates associated with useful metals. The deposits are known as potential resources of cobalt, copper, nickel, rare earth elements, platinum, and tellurium. However, the controlling parameters on the regional and temporal variations in chemical and mineralogical composition have not been clarified yet. In this session, various factors in the growth of manganese oxides, enrichment and circulation of metals, paleoenvironment, and formation age of manganese deposits will be discussed from viewpoints of geology, mineralogy, paleocean sciences, geochemistry, microbiology, and sea floor engineering.

[MZZ41-P03] Internal structures in the initial stage of formation of small manganese nodules, in the northeastern Pacific

*Masafumi MURAYAMA¹, Shinsuke Yagyu², Kosei Kawata³, Keiji Horikawa⁴ (1.Faculty of Agriculture and Marine Science, Kochi University, 2.Center for Advanced Marine Core Research, Kochi University, 3.Faculty of Science, Kochi University, 4.Graduate School of Science and Engineering for Research, University of Toyama)

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Small manganese nodules were found at the surface sediment of seamount in the northeastern Pacific during the R/V *Hakuho-maru*, KH-17-3 cruise. Nondestructive technique of micro focus X-ray computed tomography (μ -CT) allows visualization of the internal structure of these nodules. The thickness of covering Fe-Mn oxide layers in the nodules were a few millimeters which might be in the initial stage of formation of manganese nodule. Here we report the results of internal structures of these manganese nodules.