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

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

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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

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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.