

Research Meeting in Kashiwa Campus

「Ecology of Hydrothermal System: Ecosystem Research and Environmental Impact Assessment」

Date : May.27.2013 (Mon) 9:30~17:00

May.28.2013 (Tue) 9:30~17:00

Venue : Auditorium

Atmosphere and Ocean Research Institute, The University of Tokyo

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Invited Speakers : Hiroyuki Yamamoto, JAMSTEC, kyama@jamstec.go.jp

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Hydrothermal system constructs a peculiar ecosystem where has a long history since very first biosphere at 4 billion years ago. The decadal studies on hydrothermal system brought many new evidences, e.g., fundamental structures of chemosynthetic ecosystem, connectivity among the communities of vent fields, various symbiotic relationships between bacteria and invertebrates. We have enough knowledge enable to elucidate the significance of hydrothermal system within the marine ecosystem.

Mineral and metal deposition in hydrothermal system is recent remarkable topic in the world. The research on these depositions is performed for analysis of physicochemical process and development of mining procedures. The environmental impact assessment for exploitation of the deposits is also recognized its importance to keep the sustainability. The ecological study on hydrothermal system provides useful knowledge to make a suitable assessment protocol for deep-sea hydrothermal vent field. This will be a forward step to realize an ecosystem-based management.

We would like to conduct the meeting to know the reality of hydrothermal system, to think the application of ecological knowledge for environmental assessment, and to think about next stage of the ecology of hydrothermal system.

Program

1. Environments of Hydrothermal System

“Geochemical condition” Shinsuke Kawagucci (JAMSTEC)

“Hydrothermal fluid flow system” Ken Tsuji (Kyushu Univ.)

“Hydrothermal mineral deposition” Tatsuo Nozaki(JAMSTEC)

2. Community of Hydrothermal System

“Microbial ecosystem of hydrothermal system” Ken Takai (JAMSTEC)

“Microbial ecosystem of hydrothermal plume” Michinari Sunamura (Univ. Tokyo)

“Benthic community of hydrothermal system” Hiromi Watanabe (JAMSTEC)

“Biomass of hydrothermal system” Kentaro Nakamura (JAMSTEC)

3. Ecological Habitat Mapping

“Technology of habitat mapping” Thornton Blair (Univ. Tokyo)

“Monitoring of habitat conditions” Takuro Noguchi (JAMSTEC)

4. Ecological Assessment of Hydrothermal System

“Benthic community and bottom water flow” Satoshi Mitarai (OIST)

“Mathematical ecology of benthic community” Ryota Nakajima (JAMSTEC)

“Logic and application of bioinformatics” Wataru Iwasaki (Univ Tokyo)

5. Forum on ecological assessments

Facilitators: Junichiro Ishibashi (Kyushu Univ.), Shigeaki Kojima (AORI),

Hiroyuki Yamamoto (JAMSTEC)
