

ANNUAL REPORT ON GEOTRACES ACTIVITIES IN JAPAN
JUNE 2013 – JUNE 2014

Meetings

- An international GEOTRACES relevant scientific session “Controls on the biogeochemistry of the northwestern Pacific Ocean and its adjacent marginal seas” (8 oral presentations) was co-convened by T-Y. Ho, Y. Sohrin, I-I. Lin and G.T.F. Wong in the 2013 Asia Oceania Geosciences Society (AOGS 2013) on 24 June 2013, at Brisbane, Australia.
- A national GEOTRACES session in Annual Meeting of the Geochemical Society of Japan was co-convened by H. Obata, J. Zhang, K. Norisuye and K. Horikawa on 13 Sep 2013 at Tsukuba Univ, Tsukuba, Japan. There were 11 oral presentations and 2 posters, awaking fruitful discussions on trace elements and isotopes in the Pacific and Indian Oceans.
- A national sub-committee meeting on GEOTRACES (affiliated to the national SCOR committee) in the Science Council of Japan was chaired by T. Gamo at Atmosphere and Ocean Research Institute, the University of Tokyo at Kashiwa (Japan) on March 14, 2014, for the purpose of the overall exchange and discussion of recent information on the international GEOTRACES program. Just before the sub-committee meeting, a research symposium “Advancement and new challenges in marine researches of trace elements and their isotopes” was convened by T. Gamo on March 13 and 14 at the same location. There were 18 oral presentations including a special lecture by Dr. Ken Buesseler (WHOI) entitled “Fukushima --- a view from the ocean”.

Cruises

- No GEOTRACES cruises were conducted in the past year.

Funding

- A Monokasho (Japanese government) grant-in-aid for scientific research (A) from 2011 to 2015 for GEOTRACES studies and travel fees, etc.

New publications

- Sano, Y., Hara, T., Takahata, N., Kawagucci, S., Honda, M., Nishio, Y., Tanikawa, W., Hasegawa, A. & Hattori, K. (2014): Helium anomalies suggest a fluid pathway from mantle to trench during the 2011 Tohoku-Oki earthquake. *Nature Commun.*, 5, doi: 10.1038/ncomms4084.
- Otsuka, S. & Kato, Y. (2014): Radiocesium derived from the Fukushima Daiichi Nuclear Power Plant accident in seabed sediments: Initial deposition and inventories. *Environmental Science: Processes & Impacts*, 16, 978-990 (2014).
- Kumamoto, Y., Aoyama, M., Hamajima, Y., Aono, T., Kouketsu, S., Murata, A. & Kawano, T. (2014): Southward spreading of the Fukushima-derived radiocesium across the Kuroshio Extension in the North Pacific. *Sci. Rep.*, 4, doi: 10.1038/srep04276.
- Gamo, T. (2014): Excess ²²²Rn in the bottom layer of the Japan Sea and their implication for bottom water dynamics. *Prog. Oceanogr.*, 121, 94-97.
- Takano, S., Tanimizu, M., Hirata, T. & Sohrin, Y. (2013): Determination of isotopic composition of dissolved copper in seawater by multi-collector inductively coupled plasma mass spectrometry after pre-concentration using an ethylenediaminetriacetic acid chelating resin. *Anal. Chim. Acta* 784, 33-41, doi: <http://dx.doi.org/10.1016/j.aca.2013.04.032>.

- Suzuki, T., Ootosaka, S., Kuwabara, J., Kawamura, H. & Kobayashi, T. (2013): Iodine-129 concentration in seawater near Fukushima before and after the accident at the Fukushima Daiichi Nuclear Power Plant. *Biogeosciences*, 10, 3839-3747.
- Okubo, A., Takeda, S. & Obata, H. (2013): Atmospheric deposition of trace metals to the western North Pacific Ocean observed at coastal station in Japan. *Atm. Res.*, 129, 20-32, doi: 10.1016/j.atmosres.2013.03.014.
- Okubo, A., Obata, H., Magara, M., Kimura, T. & Ogawa, H. (2013): Rapid collection of iron hydroxide for determination of Th isotopes in seawater. *Anal. Chim. Acta*, 804, 120-125, doi: 10.1016/j.aca.2013.10.004.
- Kumamoto, Y., Murata, A., Kawano, T., Watanabe, S. & Fukasawa, M. (2013): Decadal Changes in Bomb-Produced Radiocarbon in the Pacific Ocean from the 1990s to 2000s. *Radiocarbon*, 55, doi: 10.2458/azu_js_rc.55.16238.

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