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Election of one member of the Commission on the Limits of the Continental Shelf

Curriculum vitae of a candidate nominated by the Government of Japan

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Personal details

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Education

Ph.D., University of Tokyo, 1976, Geology
M.S., University of Tokyo, 1973, Geology
B.S., University of Tokyo, 1971, Geology and Mineralogy

Current positions

2008-present Vice Executive Director, Ocean Alliance, University of Tokyo
2007-present Adjunct Professor, University of The Air
2000-present Professor, Department of Earth and Planetary Science, University of Tokyo



Professional experience

2006-2007	Chair, Department of Earth and Planetary Science, University of Tokyo
1996-2000	Chief Geologist, Geological Survey of Japan ¹
1992-1996	Chief, Experimental Mineralogy Section, Geological Survey of Japan
1990-1991	Deputy Director, Research Planning Office, Geological Survey of Japan
1985-1992	Senior Research Geologist, Geological Survey of Japan
1979-1981	Visiting Researcher, Department of Geology, University of Toronto, Canada
1976-1985	Assistant Professor, Geological Institute, University of Tokyo

Research activities

My current research interests are mainly focused on: (a) the seafloor hydrothermal activities both on the mid-ocean ridge and the arc-backarc systems; (b) the massive sulphide deposits related to hydrothermal activity and the ferromanganese crust deposits as deep-sea mineral resources; (c) the microbial geochemistry of the subseafloor biosphere; (d) the geochemical cycle within and from the hydrothermal systems; and (e) the “rare-metal” mineral resources on land and seafloor. I have led and continue to lead many major seagoing research projects, including the Japan-France-SOPAC STARMER project (1987-1991) on the tectonics and hydrothermal activity in the North Fiji Basin; the Japan-US RidgeFlux project (1993-1998) on hydrothermal intensity on the super-fast-spreading East Pacific Rise; the Archaean Park project (2000-2006) on the deep biosphere related to seafloor hydrothermal activity; and the current TAIGA project (2008-2012; see <http://www.gbs.eps.s.u-tokyo.ac.jp/~taiga/en/index.html>).

Research cruise experience (* as Principal Investigator or Co-P.I.)

May 2011	*R/V <i>Hakureimaru</i> No. 2/BMS cruise to Okinawa Trough, Japan (TAIGA project)
June 2010	*R/V <i>Hakureimaru</i> No. 2/BMS cruise to Southern Mariana Trough (TAIGA project)
February 2009	*R/V <i>Natshushima</i> /RO V <i>Hyper Dolphin</i> cruise to Takuyo-Daigo Seamount, north-western Pacific (Japan Agency for Marine-Earth Science and Technology (JAMSTEC) cruise)
June 2004	*R/V <i>JOIDES Resolution</i> Leg 301 of the Integrated Ocean Drilling Programme to Juan de Fuca Ridge, north-eastern Pacific
January 2004	*R/V <i>Hakureimaru</i> No. 2/BMS cruise to Southern Mariana Trough, north-west Pacific (Archaean Park project)

¹ Geological Survey of Japan, Agency of Industrial Science and Technology, Ministry of International Trade and Industry of Japan: the Geological Survey of Japan was reorganized in 2001 into the National Institute of Advanced Industrial Science and Technology (AIST).

July 2002	* <i>R/V Hakureimaru No. 2/BMS</i> drilling cruise to Izu-Bonin (Archaean Park project)
June 2001	* <i>R/V Hakureimaru No. 2/BMS</i> (tethered marine drill) drilling cruise to Izu-Bonin Arc, Japan (Japan-United States)
September 1998	* <i>R/V Yokosuka/Shinkai 6500</i> submersible cruise to East Pacific Rise (Japan-United States)
October 1995	* <i>R/V Yokosuka/Shinkai 6500</i> cruise to Papua New Guinea (Japan-Papua New Guinea-SOPAC)
September 1994	* <i>R/V Yokosuka/Shinkai 6500</i> submersible cruise to East Pacific Rise (Japan-United States)
November 1993	* <i>R/V Melville</i> cruise to southern East Pacific Rise (Japan-United States Ridge Flux project)
December 1991	* <i>R/V Suroit/Cyana</i> submersible cruise to Vanuatu (Japan-France SOPAC STARMER project)
August 1991	* <i>R/V Yokosuka/Shinkai 6500</i> submersible cruise to North Fiji Basin (Japan-France-SOPAC STARMER project)
June 1989	<i>R/V Nadir/Nautila</i> submersible cruise to North Fiji Basin (Japan-France-SOPAC STARMER project)
July 1987	<i>R/V Atlantir II/Alvin</i> submersible cruise to Izu-Bonin Arc, north-western Pacific (United States-Japan cruise)
May 1986	<i>R/V Natsushima/Shinkai 2000</i> submersible cruise to Izu-Bonin Arc, north-western Pacific (Geological Survey of Japan cruise)
September 1985	<i>R/V Atlantis II/Alvin</i> submersible cruise to Galapagos Rift, off Ecuador (NOAA expedition)
June 1985	<i>R/V Nadir/Nautila</i> submersible cruise to Nankai Trough, Japan (Japan-France KAIKO project) (as well as 12 more cruises to eastern and western Pacific basin)

Professional service experiences

2010-present	Affiliated Member, Science Council of Japan
2003-present	Member, Advisory Committee for the Extension of the Continental Shelf, Cabinet Office of Japan
2006-present	Member and Chair of subcommittee, Advisory Committee for Natural Resources and Energy, Ministry of Economy, Trade and Industry, Japan
2008-2010	President, <i>Society of Resource Geology</i>
1993-1997	Member, Editorial Board, <i>Economic Geology</i>
1993-1995	Member, Editorial Board, <i>Mineralium Deposita</i>
1988-1990	Editor in Chief, <i>Mining Geology</i> (Tokyo)

Professional associations

The Society of Economic Geologists
 American Geophysical Union
 The Society of Resource Geology
 The Geological Society of Japan
 The Geographical Society of Japan
 The Geochemical Society of Japan
 The Society of Ocean Policy

Selected publications

- Kawada, Y., Seama, N., and Urabe, T. (2011). The role of seamounts in the transport of heat and fluids: Relations among seamount size, circulation patterns, and crustal heat flow. *Earth and Planetary Science Letters*, 306, 55-65.
- Yanagawa, K., Sunamura, M., Lever, M. A., Morono, Y., Hiruta, A., Ishizaki, O., Matsumoto, R., Urabe, T., and Inagaki, F. (2011). Niche separation of methanotrophic Archaea (ANME-1 and -2) in methane-seep sediments of the Eastern Japan Sea offshore Joetsu. *Geomicrobiology Journal*, 28(2), 118-129
 I : 10.1080/01490451003709334).
- Urabe, T., Okino, K., Sunamura, M., Ishibashi, J., Takai, K., and Suzula, K. (2009). Transcrustal advections and in situ biogeochemical processes of global seafloor aquifer; the sub-seafloor TAIGA. *Journal of Geography*, 118(6), 1027-1036 (in Japanese with English abstract).
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- Kato, S., Yanagawa, K., Sunamura, M., Takano, Y., Ishibashi, J., Kakegawa, T., Utsumi, M., Yamanaka, T., Toki, T., Noguchi, T., Kobayashi, K., Moroi, A., Kimura, H., Kawarabayasi, Y., Marumo, K., Urabe, T., and Yamagishi, A. (2009b). Abundance of *Zetaproteobacteria* within crustal fluids in back-arc hydrothermal fields of the Southern Mariana Trough. *Environmental Microbiology*, doi:10.1111/j.1462-2920.2009.02031.x.
- Kato, S., Hara, K., Kasai, H., Teramura, T., Sunamura, M., Ishibashi, J., Kakegawa, T., Yamanaka, T., Kimura, H., Marumo, K., Urabe, T., and Yamagishi, A. (2009a). Spatial distribution, diversity and composition of bacterial communities in sub-seafloor fluids at a deep-sea hydrothermal field of the Suiyo Seamount. *Deep-Sea Research Part I*, 56(10), 1844-1855.
- Yanagawa, K., Sunamura, M., Morono, Y., Futagami, T., de Beer, D., Urabe, T., Boetius, A., and Inagaki, F. (2009). Distribution of metabolically active microbial communities in CO₂-rich marine sediments. *Geochimica et Cosmochimica Acta*, 73, A1472-A1472 (Abstract).

- Urabe, T., Iizasa, K., and Ishibashi, J. (2009). The latest frontier of earth science and its application to mineral exploration; Submarine hydrothermal deposits as modern analogy. *Resource Geology*, 59(1), 43-72 (In Japanese with English abstract).
- Mori, K., Sunamura, M., Yanagawa, K., Ishibashi, J., Miyoshi, Y., Iino, T., Suzuki K., and Urabe, T. (2008). First cultivation and ecological investigation of a bacterium affiliated with the candidate phylum OP5 from hot springs. *Applied and Environmental Microbiology*, 74, 6223-6229.
- Marumo, K., Urabe, T., Goto, A., Takano, Y., and Nakaseama, M. (2008). Mineralogy and isotope geochemistry of active submarine hydrothermal field at Suiyo Seamount, Izu-Bonin Arc, West Pacific Ocean. *Resource Geology*, 58, 220-248 (Best Article Award).
- Urabe, T., Chiba, H., and Kato, Y. (2008). IMA Kobe 2006 Special Issue: Seafloor hydrothermal deposits of arc-backarc systems in western Pacific. *Resource Geology*, 58, 205 (Preface).
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