

## [M-TT42\_2AM2]Frontiers in Geochemistry : Innovative approaches for Earth and Planetary Sciences

Convener:\*Yusuke Yokoyama(Atmosphere and Ocean Research Institute, University of Tokyo), Hiroyuki Kagi(Geochemical Laboratory, Graduate School of Science, University of Tokyo), Shogo Tachibana(Department of Natural History Sciences, Hokkaido University), Takafumi Hirata(Graduate School of Science, Kyoto University), Urumu Tsunogai(Graduate School of Environmental Studies, Nagoya University), Katsuhiko Suzuki(Institute for Research on Earth Evolution, Japan Agency for Marine-Earth Science and Technology), Gen Shimoda(Geological Survey of Japan, AIST), Hirochika Sumino(Geochemical Research Center, Graduate School of Science, University of Tokyo), Hajime Obata(Marine inorganic chemistry division, Atmosphere and Ocean Research Institute, University of Tokyo), Yoshio Takahashi(Department of Earth and Planetary Systems Science, Graduate School of Science, Hiroshima University), Tetsuya Yokoyama(Department of Earth and Planetary Sciences, Graduate School of Science and Engineering, Tokyo Institute of Technology), Chair:Hiroyuki Kagi(Geochemical Laboratory, Graduate School of Science, University of Tokyo), Shogo Tachibana(Department of Natural History Sciences, Hokkaido University), Yusuke Yokoyama(Atmosphere and Ocean Research Institute, University of Tokyo)  
Fri. May 2, 2014 11:00 AM - 12:45 PM 314 (3F)

A variety of innovative researches have been emerged in earth and planetary sciences by virtue of the development of new chemical methods associated with novel approaches. To conduct more detailed and complicated investigation in modern geosciences, highly precise and accurate scientific data are badly needed. This session is aimed to provide an opportunity to gather various geoscientists to have a strategic discussion on geochemical frontier, especially by people who work on devising new geochemical methods as well as those who would like to apply such innovative techniques. We welcome a wide range of cutting-edge geochemical topics regarding technical development, including exploratory researches that can potentially be a breakthrough of earth and planetary sciences.

11:45 AM - 11:55 AM

## [MTT42-P02\_PG]Development on submicron-scale U-Pb dating by Laser post-ionized SNMS

3-min talk in an oral session

\*Kentarō TERADA<sup>1</sup>, Makoto NAKABAYASHI<sup>1</sup>, Moe KAMIOKA<sup>1</sup>, Michisato TOYODA<sup>1</sup>, Morio ISHIHARA<sup>1</sup>, Ryosuke NAKAMURA<sup>2</sup>, Jun AOKI<sup>1</sup>, Yuta HINO<sup>1</sup> (1. Graduate School of Science, Osaka University, 2. Office for University-Industry Collaboration, Osaka University)

Keywords: U-Pb dating, mass spectrometry, in-situ analysis, isotope analysis

In order to decipher the history of the Solar System, in-situ U-Pb dating method using SIMS (Secondary Ion Mass Spectrometry) has been used over 40 years, of which spatial resolution is 2-10 micron. In general, the secondary ion yield of SIMS is so low (less than 1 %) that it has been the weak point of this in-situ analysis. Here, we report the performance of Pb isotope measurement using the Laser SNMS that consist of of Ga-ion source for primary beam, femto-second laser for post-ionization, and the multi-turn TOF-SIMS for mass spectroscopy (Ishihara et al. 2010).