

## Introduction of NANO-EPS

SUZUKI, Yohey<sup>1\*</sup>

<sup>1</sup>Department of Earth & Planetary Science, The University of Tokyo

Nano, a prefix for  $10^{-9}$ , represents vast frontiers for both Earth and Planetary Solid Sciences. Conventional tools such as Electron Probe MicroAnalysis (EPMA) for ppm-level quantification at the micrometer scale and Power X-Ray Diffraction analysis (XRD) for the identification of submicron minerals are being transformed into the next generation instruments. In addition, it is possible to reveal the heterogeneity and oscillation of chemical and isotopic compositions at nano-spatial resolutions. It is becoming more aware that nano-sized solids with extremely large surface areas and distorted structures are ubiquitous in planetary materials and intimately relevant to many issues such as soil and groundwater contamination with metals and radionuclides, mineral resources exploitation, carbon sequestration and so on. In my presentation, nano-frontiers from various fields of Earth and Planetary Sciences and key technological advancements will be overviewed as the introduction of this session.

Keywords: nano