# The 408th Geodynamics Seminar

## Crystallization of diamonds in mantle – current understanding –

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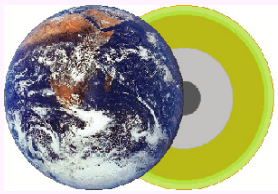
**Date: 02.13.2015 (Fri) 16:30 ~**
**Venu: Meeting Room #486, Science Research Bldg 1, Ehime Univ.**

**日時：2015年2月13日(金)16:30～**
**場所：愛媛大学 総合研究棟Ⅰ 4階共通会議室**



EHIME UNIVERSITY GRC GEODYNAMICS RESEARCH CENTER


## Abstract

Diamond plays a principal role in the deep carbon cycle in Earth's interior. To understand the diamond genesis in the mantle, an extensive series of studies have been carried out to describe its morphology, inclusions, stable isotope, etc. in the past decades. The findings of fluid inclusions with varying degrees of compositions (silicate-carbonate-saline) and hydrous mantle mineral inclusions as well as the carbon isotope signatures suggest metasomatic formations of diamonds in the presence of C-H-O fluids. Recent experimental studies also indicate the important role of such fluids in the nucleation and growth of diamonds in the mantle condition. In the present talk, I will present the background and major achievements of the published works and summarize the current understanding on diamond formation in the mantle. Then, I will talk about the summary of our recent study on polycrystalline diamonds, which also account for a substantial amount of the kimberlite-hosted diamonds. It demonstrates that the growth mechanism and resulting morphology/texture of diamond can vary successively from monocrystalline to polycrystalline even by subtle changes in formation environment.


詳細は当センターホームページ：http://www.grc.ehime-u.ac.jp/ をご覧ください
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