ーーーーーーーーーーーーーーーーーーーーーーーーーーーーーーーー
＝＝＝＝＝＝＝＝＝＝＝＝ 物理学教室 ＝＝＝＝＝＝＝＝＝＝＝＝＝＝＝＝
＝＝＝＝＝＝＝＝＝ 物性コロキュウム ご案内 ＝＝＝＝＝＝＝＝＝＝
ーーーーーーーーーーーーーーーーーーーーーーーーーーーーーーーー

日時：２０１８年７月１２日（木）１６：２０－１７：５０

場所：理学研究科合同Ａ棟２０５号室（205, Science complex A）

講師：梅本幸一郎 氏（東京工業大学）
[Koichiro Umemoto (Tokyo Institute of Technology)]

題目：First-principles predictions of post-post-perovskite transitions in
MgSiO3 under ultrahigh pressures

概要：
MgSiO3 (bridgmanite) is the major constituent of the lower mantle of the Earth. It transforms to the post-perovskite (ppv) structure at pressure and temperature conditions near the core-mantle boundary. The ppv is the final form of MgSiO3 in the Earth. Under higher pressures, what will happen? In other words, what are post-ppv transitions? This question becomes important when we consider big terrestrial exoplanets, i.e., super-Earths, in which pressure and temperature are much higher than those of the Earth's lower mantle. Understanding of fate of MgSiO3 ppv under ultrahigh pressures is crucial for nature of interiors of super-Earths. However, in spite of recent advances of high pressure experiments, it has been still very difficult to achieve ultrahigh pressure for interiors of super-Earths experimentally. So, first-principles studies are very powerful to investigate material properties under ultrahigh pressures. Here we discuss the post-ppv transitions in ternary system of Mg-Si-O by first-principles calculations.

講演は英語で行われます。

連絡先：是常 隆（795-6439）

―――――――――――――――――――――――――――――――――

世話人：岩井 伸一郎（795-6423）　松井 広志（795-6604）
　　村島 隆浩　（795-5718）　大槻 純也（795-6365）