

共同利用・共同研究拠点

明治大学先端数理科学インスティテュート  
現象数理学研究拠点(CMMA)



## MIMS/CMMA Seminar on Self-Organization

### 第30回 自己組織化セミナー

2019年12月3日 (Tue) 16:00~17:00

明治大学中野キャンパス 6階 研究セミナー室

#### Self-assembly of nanoparticles:

Existence of a precipitation threshold in the electrostatic precipitation of oppositely charged nanoparticles

István Lagzi

(Budapest University of Technology and Economics)

#### Abstract

Oppositely charged nanoparticles precipitate rapidly only at the point of electroneutrality, wherein their charges are macroscopically compensated. In my talk, I will present results on the aggregation and precipitation of oppositely charged nanoparticles at concentrations ranging from 10 to  $10^{-3}$  mM (based on gold atoms) by using UV-Vis measurements. We employed solutions of equally sized (4.6 nm) gold nanoparticles, which were functionalized and stabilized with either positively or with negatively charged alkanethiols. Results showed that oppositely charged nanoparticles do not precipitate if their concentration is below a certain threshold even if the electroneutrality condition is fulfilled. This finding suggests a universal behavior of chemical systems comprising oppositely charged building blocks such as ions and charged nanoparticles.

参加自由です。皆様のお越しをお待ちしております。

#### ・中野キャンパスへのアクセス

JR中央線快速・総武線、東京メトロ東西線／中野駅下車 北口より徒歩約8分

詳しくは、[http://www.meiji.ac.jp/koho/campus\\_guide/nakano/access.html](http://www.meiji.ac.jp/koho/campus_guide/nakano/access.html)

世話人：末松 J. 信彦、山口智彦

組織委員：池田幸太、上山大信(武蔵野大学)、小川知之、小田切健太(専修大学)、三村昌泰(広島大学/MIMS)

連絡先：suematsu@meiji.ac.jp

協賛：研究者交流支援制度、現象数理・ライフサイエンス融合教育プログラム