

公開講演会 最新化学談話シリーズ

平成29年度第10回談話会

Metal Ion and Charged Nanoparticle Transfer across Liquid Interfaces

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主催 九州大学理学部化学教室談話会

日時：平成29年12月20日（水）午後15時30分より

場所：九州大学基幹教育院C1-3301セミナー室

(伊都キャンパス センター3号館3301セミナー室)

内容: Electrostatic interactions control processes at liquid interfaces that underlie many scientific and industrial processes. I will discuss two types of ion transport in which ions are transferred from an aqueous phase to an organic phase. An electrostatic energy penalty accompanies transport into the lower permittivity organic phase and requires shielding of the ion charge. X-ray scattering and other techniques are used to demonstrate the unusual mechanisms for shielding heavily charged nanoparticles and multi-valent ions. In the case of heavily charged nanoparticles, enhanced ion correlations that exist in the organic phase lead to charge reversal simultaneously with the transport. In the case of multivalent metal ions, X-ray studies reveal the formation of interfacial ion-extractant complexes that are subsequently solvated in the organic phase.

(注)この講演は大学院集中講義の一部です。

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