

高等研究所 第 66 回 月例研究会 (WIAS 66th Monthly Workshop)

【日 時】7 月 11 (金) 11 : 00~12 : 30

【会 場】9 号館 5 階 第一会議室

【発表者】Prof. SOLA BELDA, Carles (訪問研究者)

黒田 義之 助教

1. Prof. SOLA BELDA, Carles :

Associate Professor, Universitat Autònoma de Barcelona (Spain)

WIAS visiting fellow : 11 : 00~11 : 40

Title: Experimental research in personnel economics.

(Summary)



In this talk I will provide some insights in my research in experimental and behavioral economics around topics related to human behavior inside organizations. In a general sense, one could argue that organizations face two main problems: coordination and incentive problems. Of course both of them have been analyzed at length. However, many questions remain unsolved as one observes how different organizational forms solve their specific problems in ways that standard analysis does not integrate. Experimental research is an alternative methodology to others already in use allowing us to study some of these questions with the benefit of control and replication. Hence, in my research I apply this methodology to increase my understanding of negotiations, promotion decisions, compensation schemes, leader turnover and others. This research has shown that intentions, social preferences, personal relations and biases, among others, play a quantitatively important role. The results obtained so far indicate that the increasing interaction

between economics, psychology and sociology can help us to improve our knowledge of organizational behavior and help them to improve their efficiency levels.

2. 黒田 義之 助教 (Yoshiyuki Kuroda) : 11 : 50～12 : 30

「無機層状物質のナノ構造設計と機能」



無機物質は周期表上の多様な元素を含む物質であり、構造、組成に応じた特異な機能を発現する。無機物質の機能は、原子・分子のスケールに近いナノ構造と密接に関連しており、近年ナノ構造制御に注目が集まっている。無機層状物質は原子スケールとナノメートルスケールで規則的な構造を有する興味深いナノ構造体であり、有害物質の吸着除去や資源回収等に利用できる。本発表では、層状カオリナイトの剥離によるナノスロール構造体の形成 (Fig. 1)、及び層状複水酸化物の高精度な粒子径縮小 (Fig. 2) を例に挙げ、これらのナノ構造体の吸着特性に着目しつつ、ナノ構造設計の有効性について議論する。

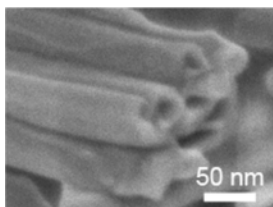


Fig. 1. SEM image of kaolinite nanoscrolls.

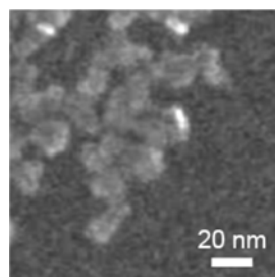


Fig. 2. SEM image of LDH nanoparticles.

Nanostructural Design of Inorganic Layered Materials and Their Functionalities

Inorganic materials, consisting of various elements, show unique properties depending on their structure and composition. Nanostructural control of inorganic materials gathers much attention because nanoscale structures are closely related to their functionalities. Inorganic layered materials are interesting nanostructured materials because they possess ordered structures both in atomic and nanometer scales and can be applied for adsorptive removal of harmful pollutants and resource recovery. In this presentation, the significance of nanostructural design of inorganic layered materials for adsorption properties is discussed by introducing two examples: the delamination of layered kaolinite clays into nanoscrolls (Fig. 1), and well-controlled size reduction of layered double hydroxides (Fig. 2).