

RIKEN Seminar

Time & Date : Thursday, April 21st, 2011, 3:00-4:00 PM

Place : Seminar room, 2nd floor, The Nanoscience Joint Laboratory

Language: English

“Unoccupied electronic structure at interface between organic film and substrate“

Prof. Toshiaki Munakata

Graduate School of Science, Osaka University

The electronic structure and the excited electron dynamics in the vicinity of the Fermi level (E_F) at interfaces between organic thin films and inorganic substrates are the key issues to understand the functionalities of organic films. Though occupied energy levels have been extensively studied by both experimental and theoretical works, investigation for unoccupied levels are still challenging. Two-photon photoemission (2PPE) spectroscopy based on ultrafast laser pulses is a promising method to probe the unoccupied levels and electron dynamics in the levels. In 2PPE, a first light pulse excites electron from an occupied level to an unoccupied level. The normally unoccupied level is probed by photoemission with the second pulse. Here, a primitive and fundamental question is the physical meaning of the unoccupied level detected by 2PPE experiment. The relations between neutral exciton or anion states are not clear. We discuss the resonant excitation processes in 2PPE taking lead phthalocyanine (PbPc) film on graphite as a sample. The results cannot be interpreted by a simple energy level scheme, and point to further understanding of 2PPE process.

日時：平成23年4月21日(木) 15-16時

場所：ナノサイエンス実験棟 2階 セミナー室

使用言語：英語

“Unoccupied electronic structure at interface between organic film and substrate”

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