國立台灣大學材料系

演講公告

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題　目：Many-body interactions at complex oxide interfaces studied by cross-sectional scanning tunneling microscopy

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地　點：工綜館 228 研討室

*******歡迎參加*******

Many-body interactions at complex oxide interfaces studied by cross-sectional scanning tunneling microscopy

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Abstract

Unlike traditional metals and semiconductors, where electrons are treated as electron gas (weakly interactions), complex oxides exhibit a highly coupled environment for charge, spin, orbital and lattice to have strong interactions. These highly coupled interactions provide a unique environment for many novel functionalities, such as superconductivity, ferromagnetism, ferroelectricity, coloso-magnetoresistance, and multiferroics. These highly coupled interactions are also, on the other hand, the reason that the properties of these materials are difficulty to be predicted. In this talk, I will introduce recently developed experimental technique - cross-sectional scanning tunneling microscopy and spectroscopy (XSTM/S) for studying complex oxide interfaces [1–9]. This will include the challenges and future perspectives of XSTM/S for complex oxides by demonstrating some successful examples.

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