

Language: Japanese

Date : Apr.9 (Wed), 2014, 16:00 ~ 17:00

Location : Cooperation Center, 5F Meeting Room, W524
(研究交流棟5階会議室W524)

Title : Controlled Growth of ZnO Nano/Micro-Crystals
and Their Application as Building Blocks
for Light Emitting Devices

Speaker : **Prof. Tatsuo OKADA**
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ZnO is a II-VI wide band gap semiconductor with a direct band gap energy of 3.37 eV and a large exciton binding energy of 60 meV. It is abundant and bio-friendly materials. Low dimensional ZnO crystals such as nanowires, nanosheet and micro sphere and so on are especially attractive as the building blocks for the ultraviolet (UV) light emitting devices, because an optical function of the waveguide or the cavity can be realized by self-organization without using the expensive and complicated micro-nano machining processes like optical lithography. In this talk, we describe (1) a controlled-growth of ZnO nano/micro crystals, (2) the photo emission characteristics of the low dimensional ZnO crystals under optical and electrical excitation, and (3) the laser processing for the controls of the electrical and optical characteristics of ZnO nano crystals