

SEMINARANKÜNDIGUNG

Freitag, 08. April 2011

12:30 Uhr

ZNN, Seminarraum

„Optical characterization of organometallic molecules and of mesoscopic soft condensed matter structures”

Ionic transition metal complex (iTMC) potentially respond to the need to obtain high efficient light emitting device, which are eco-compatible and enables efficient charge injection and recombination without the inclusion of interfacial injection and charge transport layers in the device structure. Photoluminescence (PL) and electroluminescence (EL) investigation of light-emitting electrochemical cells (OLEEC) based on $[\text{Ir}(\text{4,5-diphenyl-2-methylthiazolo})_2(5\text{-methyl-1,10-phenanthroline})]^+ [\text{PF}_6]^-$ reveals the excimer nature of the EL emission after several biasing steps. Excimers are normally formed when intermolecular interactions take place between molecules, thus denoting a degradation mechanism induced by the heating. On the other hand, most of the organic polymers are also known for their ability to self-organise in ordered manner by dewetting mechanisms. Evaporative dewetting leads to nanopatterning of well organised mesoscopic rings based on nanocrystals and obtained by water droplets array on a polymer film. This technique known as “breath figures”, might open the way to the characterization of single and coupled rings structures based on QDs, magnetic molecules and other related systems.

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