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In-situ spectro-microscopy on organic films: Mn-Phthalocyanine on Ag(100)[1] ABDULLAH AL-MAHBOOB, JERZY T. SADOWSKI, Center for Functional Nanomaterials, Brookhaven National Laboratory, Upton, NY 11973, ELIO VESCOVO, Photon Sciences, Brookhaven National Laboratory, Upton, NY 11973 — Metal phthalocyanines are attracting significant attention, owing to their potential for applications in chemical sensors, solar cells and organic magnets. As the electronic properties of molecular films are determined by their crystallinity and molecular packing, the optimization of film quality is important for improving the performance of organic devices. Here, we present the results of in situ low-energy electron microscopy / photoemission electron microscopy (LEEM/PEEM) studies of incorporation-limited growth [1] of manganese-phthalocyanine (MnPc) on Ag(100) surfaces. MnPc thin films were grown on both, bulk Ag(100) surface and thin Ag(100)/Fe(100) films, where substrate spin-polarized electronic states can be modified through tuning the thickness of the Ag film [2]. We also discuss the electronic structure and magnetic ordering in MnPc thin films, investigated by angle- and spin-resolved photoemission spectroscopy.

[1] Al-Mahboob et al., Phys. Rev. B 82, 235421 (2010).
[2] E. Vescovo et al., Phys. Rev. B 51, 12418 (1995).

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