BILKENT UNIVERSITY

unam - INSTITUTE of MATERIALS SCIENCE & NANOTECHNOLOGY

FACULTY OF SCIENCE

MATERIALS SCIENCE and NANOTECHNOLOGY GRADUATE PROGRAM SEMINAR

"Organic (Molecular) Thin Films: Characterization and Applications"

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Organic thin films are the subject of intense research due their uses in increasingly many applications ranging from electronic displays to sensors in electronics, from drug delivery to biocompatible materials in biology and from lubrication to surface protection in mechanics. In many of the above mentioned applications organic thin films are either used as the active medium or as an intermediate medium/interface. In the latter case the films are either further functionalized/ tailored/patterned or act as host/reference environment for characterization of other systems of interest. Hence it is very important (1) to understand the fundamental properties of these films, (2) to characterize them thoroughly before any further functionalization, (3) to be able to prepare them reproducibly in a controlled fashion and (4) to be able to tailor them for achieving the desired functionality. In this talk I will first present my previous work, oriented towards realizing these goals, on thiol and silane self assembled monolayers and pentacene thin films which are heavily used in many of the applications mentioned above. To this end preparation of these films and their characterization by means of Helium atom diffraction, (photoelectron and grazing incidence) X-ray diffraction, reflection infrared spectroscopy and atomic force microscopy techniques will be discussed. In the second part of the presentation I will talk about the current and planned research activities, of our research group, in related areas.

Date : October 1, 2009 (Thursday)
Time : 15:40
Place : Faculty of Science Building, A Block, Seminar Room (SA 240)
Tea and cookies will be served after the seminar