ΕΙΧΗΜΥΘ-ΙΤΕ

ΣΕΜΙΝΑΡΙΟ

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ΘΕΜΑ: Nanoscale Interactions:
Implications in Biomimetics and Materials

ΤΟΠΟΣ: Αίθουσα Σεμιναρίων ΕΙΧΗΜΥΘ

ΗΜΕΡΟΜΗΝΙΑ: 3 Ιανουαρίου 2000

ΩΡΑ: 12:00

ΠΕΡΙΛΗΨΗ:

In many rapidly advancing areas of technology, such as fabrication of new nanostructured materials, development of biocompatible biomaterials and control of targeted drug delivery and medical diagnostic systems, progress depends on our ability to control interactions at the nanoscale level. My work over the past years has aimed at contributing to a fundamental understanding of the interactions between surfaces that range from heterogeneous micropatterns to artificial biomembranes using atomic force microscopy techniques.

During this presentation two representative examples will be discussed: surface pattern recognition by a colloidal particle and adhesion of integrin receptors to biomimetic substrates. The first one demonstrates that by varying the size and density of a surface pattern one can potentially prepare surfaces able to direct particle attachment and adhesion at desirable positions. The second one shows the use of a model biomimetic system to investigate unbinding processes between ligand-receptor pairs. The implications of these findings in making ordered nanostructures by colloidal assembly and designing biomaterials with specific functionality will be discussed.