



**BILKENT UNIVERSITY**

**unam** - INSTITUTE of MATERIALS SCIENCE & NANOTECHNOLOGY

***FACULTY OF SCIENCE***

**MATERIALS SCIENCE and NANOTECHNOLOGY  
GRADUATE PROGRAM SEMINAR**

**“PLASMA POLYMERIZATION TECHNIQUE  
FOR PREPARING BIOSENSORS”**

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Plasma Aided Bioengineering and Biotechnology Research Group  
Hacettepe University

Cold plasma modification of polymers and deposition of thin polymer films is a branch of science characterised by an increasing popularity in the last few years for the large number of new industrial processes that have been realised by its application. Plasma modified products feature “surfaces” with tailored and unusual properties, which enable their use where otherwise would be impossible to conventional materials. Plasma produces-, or plasma modified- polymers can, in fact, be considered an entirely novel class of materials with tunable properties showing e.g. chemical inertness or enhanced reactivity, hardness, variable refractive index, hydrophobicity or -phylicity, adhesivity, dyebility, blood compatibility, bacterial infections resistance, etc.

The field of sensing technology covers a vast area of expertise and application in various areas. The sensor is a logical element in the information acquisition chain, sensors provide information about our physical, chemical and biological environments. The rapid growth in technology and its application has created a major market for various kinds of sensing devices to maintain the high quality of the final product and simultaneously to increase the yield.

There is no doubt that chemical sensors and biosensors are fast-moving, critical technologies for industrial and biomedical marks. Sensors find wide applications in medicine (e.g. blood chemistry determinations and immunological and microbiological testing), food, agriculture, and environmental and industrial monitoring. The efforts to reduce the risk of cross-contamination and physician viability risks are opening up opportunities for the manufacturers of disposable biomedical sensors.

In this seminar, the principle and advantages of glow discharge treatment of surfaces for single layer enzyme electrode and mass sensitive immunosensor preparation will be reviewed.

**Date : December 17, 2010 (Friday)**

**Time : 15:40**

**Place : Faculty of Science Building, A Block, Seminar Room (SA 240)**

**Tea will be served after the seminar**