



KOÇ UNIVERSITY

Math-Science Seminar

Speaker: Galip G. Tepehan (Department of Physics, Istanbul Technical University)

Title: Optical and Electrochromic Properties of Sol-Gel Made Thin Films

Date and Time: Thursday, May 10, 4:45 pm.*

Place: Room Z42, Science Building, Koç University, Rumelifeneri Yolu, Sariyer 80910 Istanbul, Turkey.

Abstract: Electrochromic (EC) materials have a wide range of applications such as architectural windows, displays, automobiles, sensors and electronic technologies. The primary focus of our research involves the area that relates to EC “smart windows” for energy conservation in building technologies. The sol-gel dip and spin coating processes are important method for the preparation of thin films used in the field of electrochromism. Porous structure of sol-gel made films have the required properties for ion-storage counter electrodes. The optical and electrochromic properties of pure and doped WO_3 , Ta_2O_5 , and $\text{CeO}_2\text{-TiO}_2$ thin films were investigated. A scanning electron microscope was used for the analysis of the surface structure. Electrochromic properties of the films were studied by means of cyclic voltametry.

*Refreshments to be served in Science Building, Room Z40 at 4:30 pm.