

XRD and FTIR studies for Ag/PMMA Nano composite thin films

A.Kadhim, Hammad R. Humud, and Lubna Abd Al Kareem

Abstract— Ag/PMMA nanocomposite thin movies stored on glass substrates by in-situ airborne helped plasma jet polymerization at climatic weight and room temperature from MMA monomer within the sight of Ag nanoparticles were considered. Five different concentration of silver nanoparticles were used (3, 5, 7, 9 and 11wt%). The prepared thin films were characterized by XRD, FT-IR, The results indicate that the synthesized polymer and there Ag nanocomposites are expected to be good candidates for applications in optical devices like optical switches and optical limiting.

Index Terms— Ag/PMMA nanocomposite , XRD , FT-IR

A. Kadhim is currently Assistant Prof. with Laser and optoelectronic Eng. Department, University of Technology, Baghdad 10066, Iraq.

Hammad R. Humud is currently Assistant Prof. with Department of Physics, College of Science, and University of Baghdad, Iraq.

Lubna Abd Al Kareem is currently Assistant Lecturer with Laser and optoelectronic Eng. department, University of Technology, Baghdad, Iraq.