Characteristic and moisture permeability of SiOxCy thin film synthesized by Atmospheric pressure-plasma enhanced chemical vapor deposition

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Atmospheric pressure- plasma enhanced chemical vapor deposition(AP-PECVD)Processes are recognized as promising and cost effective methods for wide-area coating on sheets of steel, glass, polymeric web, etc.

In this study, SiO_xC_y thin films were deposited by using AP-PECVD with a dielectric barrier discharge(DBD). The characteristic of SiO_xC_y thin films were investigated as afunction of the HMDSO/O2/He flow rate. And the moisture permeability of SiO_xC_y thin films was studied. The SiO_xC_y thin films were characterized by the Fourier-transformed Infrared(FT-IR) spectroscopy and also investigated by X-ray photo electron spectroscopy(XPS), Auger Electron Spectroscopy(AES). The moisture permeability of SiO_xC_y thin films was investigated by H_2O permeability tester

Detailed experimental results will be demonstrated through th present work.

Keywords
AP-PECVD
DBD
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HMDS