

Abstract Submitted
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Characterization of PET Samples Processed in an RF Oxygen Discharge RUSSELL L. RHOTON, MARY L. BRAKE, Eastern Michigan University — A radio frequency plasma (13.56 MHz) was used to modify the surface of poly(ethylene terephthalate) (PET). Optical emission spectroscopy (OES) was used to characterize the plasma and the Sessile drop method was used to determine surface changes after processing. The OES changed depending upon the pressure of the plasma. Molecules of OH and atomic oxygen were observed at low pressures (~ 0.1 torr) whereas CO and atomic hydrogen were observed at higher pressures (~ 1 torr). There was an observable change in the PET samples after processing; in particular, the surface was degraded. The Sessile drop method was used to determine the relative change in the wettability of the surface along a continuum from hydrophobic to hydrophilic.

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