

Abstract Submitted
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An atmospheric pressure air plasma source for polymer surface modification¹ SHUJUN YANG, Old Dominion University, JIANSHENG TANG — An atmospheric pressure air plasma source was generated through dielectric barrier discharge (DBD). The plasma source was characterized on electron density, emission spectrum, and ozone density. The modification of polyethyleneterephthalate (PET) surfaces by this plasma was investigated. PET strips were exposed to the plasma at the exit of the plasma source. Water contact angles were measured for surfaces modified with different processing parameters. The contact angle could drop from 70 to 37 degrees within less than one second of modification. The change in contact angles was monitored as a function of time. The surface modification was found to be mainly a chemical and photochemical process.

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