

Abstract Submitted
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Polyethyleneterephthalate surface modification mechanisms by an atmospheric pressure RF plasma source¹ SHUJUN YANG, Alabama A&M University, JIANSHENG TANG, Hunan First Normal University — An atmospheric pressure plasma was generated by a RF capacitive discharge using Helium gas or a mixture of helium and oxygen. The plasma was used to modify polyethyleneterephthalate (PET) surfaces with extremely high throughput. The surface modification mechanisms were carefully investigated. The modification was determined to be mainly a chemical and photochemical process through the experiments and analysis on ions, UV light, oxygen atoms, and ozone molecules.

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