

THE RELATIONSHIP BETWEEN WATER CONTACT ANGLE AND
ADHESION PEEL FORCE IN UV-TREATED OTS MULTILAYERS

by

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ABSTRACT

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Polymer surfaces made hydrophilic by timed exposure to UV light can be characterized by measuring their water contact angle. Additionally, adhesive force of the roughened and functionalized surfaced can be measured via a vertical peel test. Water contact angle and peel force for a given surface exhibit a linear relationship. We suggest that one can conceivably be used to predict the other. Our work focused on octydecyltrichlorosilane (OTS), which was laid down by solution chemistry and modified by exposure to UV light. Preparation, treatment, and characterization methods are described to encourage further study.

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