Atmospheric Pressure Plasma Treatment of Polymers: Relevance to Adhesion

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DESCRIPTION

The Atmospheric Pressure Plasma (APP) treatment for polymer surface modification has attracted much attention recently, owing to its advantages over other techniques and its ability to improve adhesion without tampering with polymer's bulk properties. Focusing on the utility of APP treatment for enhancing polymer adhesion, this book covers the latest development in this important and enabling technology, providing profound insights from many top researchers on the design and functions of various types of reactors, as well as current and potential applications of APP treatment.

ABOUT THE AUTHOR

Michael Thomas is the head of the Department of Atmospheric Pressure Processes at the Fraunhofer Institute for Surface Engineering and Thin Films (IST), Germany, and has more than 15 years' experience in surface technology. Trained as a chemist, his work is focused on fundamental and industrial projects of surface treatment and coatings in the area of plasma processes at atmospheric pressure, with specific interest in adhesion using dielectric barrier discharge and microplasma-based processes. He has published more than 30 technical papers and professional articles and holds 10 patents on the topic of atmospheric pressure plasma technology.
Kashmiri Lal Mittal was employed by the IBM Corporation from 1972 through 1993. Currently, he is teaching and consulting worldwide in the broad areas of adhesion as well as surface cleaning. He has received numerous awards and honors including the title of doctor honoris causa from Maria Curie-Skłodowska University, Lublin, Poland. He is the editor of more than 110 volumes dealing with adhesion measurement, adhesion of polymeric coatings, polymer surfaces, adhesive joints, adhesion promoters, thin films, polyimides, surface modification, surface cleaning, and surfactants.

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