

PRELIMINARY PROGRAM  
TENTH INTERNATIONAL SYMPOSIUM ON

POLYMER SURFACE MODIFICATION  
RELEVANCE TO ADHESION

To be held June 19-21, 2019 in collaboration with the  
Rochester Institute of Technology, Rochester, New York,  
USA

SYMPOSIUM HISTORY AND MOTIVATION

This the 10th symposium in the series which continues the tradition set by the first in the series entitled: "Polymer Surface Modification: Relevance to Adhesion" which was held in Las Vegas, NV, 1993. As with its predecessors, this symposium will be concerned with the technological areas where surface modification is a key technology which allows for the processing and manufacture of products which would otherwise be unobtainable.

Proper adhesion characteristics are vital to the success of any practical implementation of polymer materials. Though polymers are generally not very adhesionable, careful surface modification can result in greatly improved adhesion without altering bulk properties.

AUDIENCE AND PARTICIPATION

This symposium is organized to bring together scientists, technologists and engineers interested in all aspects of polymer surface modification, to review and assess the current state of knowledge, to provide a forum for exchange and cross-fertilization of ideas, and to define problem areas which need intensified efforts.

SUBMITTING A PAPER

This symposium is being organized by MST Conferences under the direction of Dr. K. L. Mittal, Editor, Reviews of Adhesion and Adhesives. Please notify the conference chairman of your intentions to present a paper as early as possible. An abstract of about 200 words should be sent by June 7, 2019 to the conference chairman by any of the following methods:

E-mail: [rhl@mstconf.com](mailto:rhl@mstconf.com)  
FAX: 212-656-1016  
Regular mail:

Dr. Robert H. Lacombe  
Conference Chairman  
3 Hammer Drive  
Hopewell Junction, NY 12533, USA

Contact by phone: 845-897-1654; 845-592-1963  
Full conference details and registration via the Internet will be maintained on our web site:

<http://mstconf.com/surfmod10.htm>

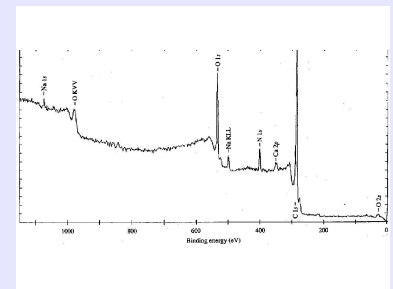
Click below to get on the symposium mail list:

ONLINE RESPONSE FORM: [www.mstconf.com/resp-spring-2019.htm](http://www.mstconf.com/resp-spring-2019.htm)

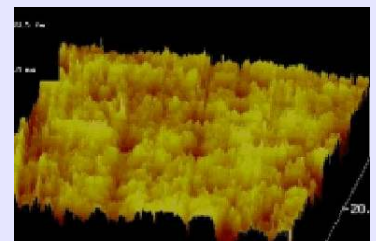
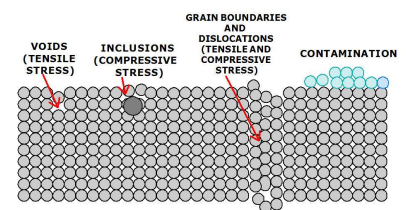
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Photo courtesy of Plasmatreat



A VARIETY OF DEFECT STRUCTURES AND IMPERFECTIONS  
MAKE DETERMINING THE SURFACE ENERGY/SURFACE TENSION OF  
SOLIDS VERY DIFFICULT



## ORGANIZERS AND CONTACT INFORMATION:

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## AMONG TOPICS TO BE COVERED ARE: SURFACE MODIFICATION TECHNIQUES

- ▶ Plasma, ultraviolet, corona, laser, ion beam, atmospheric plasma, flame ...
- ▶ Mechanical roughening
- ▶ Monolayer deposition, grafting and wet chemical

## POLYMER SURFACE MODIFICATION FOR ADHESION IMPROVEMENT OF:

- ▶ Metal layers (metallized plastics)
- ▶ Organic coatings, inks, composites, adhesive joints, microorganisms

## APPLICATIONS AND SURFACE CHARACTERIZATION

- ▶ Packaging, composites
- ▶ Biomedical applications
  - i. implants
  - ii. sterilization
  - iii. improved cell adhesion
- ▶ Microelectronics, aerospace, marine...
- ▶ All methods for characterization of surface chemistry and morphology, (Contact Angle, XPS, SIMS, AFM ...)

**SYMPOSIUM OPENS JUNE 19, 2019 AT 2:00 pm WITH A SOCIAL HOUR/MIXER. TOURS OF THE Golisano Institute for Sustainability AND THE Semiconductor & Microsystems Fabrication Laboratory ARE BEING OFFERED TO ALL INTERESTED PARTICIPANTS AT THE END OF THE SOCIAL HOUR**

**STARTING AT 9:00 am THURSDAY THE 20TH TILL NOONTIME FRIDAY THE 21ST THE FOLLOWING IS A SAMPLE OF PAPERS TO BE PRESENTED AT THE SYMPOSIUM (A number of potential authors have yet to submit abstracts and will be in the final program when confirmed)**

Arthur J Coury; Director of Engineered Biomaterials Program, Department of Chemical Engineering, Northeastern University, 360 Huntington Avenue, Boston, MA 02115; Strategies for Achieving Durable Attachment of Biomaterials to Tissue

Joe DiGiacomo; FLYNN BURNER CORPORATION, 225 Mooresville Blvd, Mooresville, NC 28115; Latest Design Improvements in Flame Plasma Surface Treating Systems- A Simpler & More Precise Control of Flame Chemistry

Rafael J. Zaldivar, Dhruv N. Patel, James P. Nokes, Hyun I. Kim; The Aerospace Corporation, 2310 E. El Segundo Blvd., El Segundo, CA (USA); Atmospheric Plasma as a Surface Treatment Technique for Modern Composite Bonding

Choong-Jae Lee; Sungkyunkwan University, School of Advanced Materials Science and Engineering, 2066 Seobu-ro, Jangan-gu, Suwon, Kyung-Gi, 16419, Republic of Korea; Reliability of Ag-based Nanopastes Sintered by Various Energy Source

Massoud J. Miri, Stephanie M. Boula, Timothy A. Kovach, Surendra K Gupta, Michael Mehan, and Gerald A. Takacs; School of Chemistry and Materials Science, Rochester Institute of Technology, 85 Lomb Memorial Drive, Rochester, NY 14623  
VUV Photo-oxidation Treatment and Surface Modification of Highly Sustainable Polyesters

K. L. Mittal; MST CONFERENCES, LLC,  
Heritage Executive Suites, 2537 Route 53,  
Suite 1, Hopewell Junction, NY 12533  
Overview of Wide Range of Polymer  
Surface Modification Techniques

Anil Netravali; Dept. of Fiber Science and  
Apparel Design, Cornell University, Ithaca,  
NY 14853-4401  
Green Surface Modification for Ultra-  
hydrophobic Cotton Fabrics

Omran Omar, Bao Ha, Katerine Vega,  
Andrew Fleischer, Hyukin Moon, Joel  
Shertok, Alla Bailey, Michael Mehan,  
Surendra Gupta and Gerald Takacs; School  
of Chemistry and Materials Science,  
Rochester Institute of Technology,  
Rochester, NY, USA; Surface Modification  
of Polybenzimidazole (PBI) Treated  
with Ozone

Michael S. Pierce: School of Physics and  
Astronomy, Director RIT Materials Science &  
Engineering Program, RIT, Rochester, NY  
Coherent X-ray Scattering as a New  
Tool to Explore Dynamic Surfaces

H. Schneider, C. Schütz, K. Dilger, S.  
Hartwig; Technische Universität  
Braunschweig, Institute of Joining and  
Welding, Braunschweig, Langer Kamp 8,  
38106, Germany;  
(3-Ureidopropyl)trimethoxysilane in  
PECVD Processes for Glass Surfaces

Paul Simutis; DataPhysics Instruments  
USA Corp., 4424 Taggart Creek Road,  
#102, Charlotte, NC 28208; New Force  
Tensiometer Development for Adhesion  
Force

Gerald Takacs, Ibrahim Cisse, Shreen  
Sachdev, Marc Toro, Shin Lutondo, Devon  
Shedden, Kristen Margaret Atkinson, Joel  
Shertok, Michael Mehan, and Surendra K.  
Gupta; School of Chemistry and Materials  
Science, Rochester Institute of Technology,  
Rochester, NY, USA; Surface Modification  
of Polyethersulfone (PES) with Ozone  
and UV Photo-oxidation

R. Thomas, Z. Coovadia and K.S.V.  
Santhanam; School of Chemistry and  
Materials Science, Rochester Institute of  
Technology, Rochester, NY 14623, USA  
Conducting Polymer Surface  
modification with Graphene By An  
Electrochemical Technique For Sensor  
Applications

D.G. Waugh and J. Lawrence; School of  
Mechanical, Aerospace and Automotive  
Engineering, Faculty of Engineering,  
Environment and Computing, Coventry  
University, Gulson Road, Coventry, CV1  
2JH, UK; Laser Surface Engineering of  
Polymeric Materials for the Modification  
of Wettability Characteristics and  
Wetting Transitions

## FINAL ANNOUNCEMENT

For those who may be interested Rochester is sponsoring a music program on Friday the 21<sup>st</sup> after the close of the symposium. For details please consult the concert website:

<http://www.rochesterjazz.com/>

Finally, for those with a little extra time to spend, New York state has some excellent tourist sites ranging from Niagara Falls to the Finger Lakes wine region. Extended details of these and many more attractions may be found on the following web site:

<https://www.travelandleisure.com/travel-guide/central-and-western-new-york/things-to-do>