

This article was downloaded by:

On: 22 January 2011

Access details: *Access Details: Free Access*

Publisher *Taylor & Francis*

Informa Ltd Registered in England and Wales Registered Number: 1072954 Registered office: Mortimer House, 37-41 Mortimer Street, London W1T 3JH, UK



The Journal of Adhesion

Publication details, including instructions for authors and subscription information:

<http://www.informaworld.com/smpp/title~content=t713453635>

Meetings Program

To cite this Article (1979) 'Meetings Program', The Journal of Adhesion, 10: 1, 73 — 82

To link to this Article: DOI: 10.1080/00218467908544614

URL: <http://dx.doi.org/10.1080/00218467908544614>

PLEASE SCROLL DOWN FOR ARTICLE

Full terms and conditions of use: <http://www.informaworld.com/terms-and-conditions-of-access.pdf>

This article may be used for research, teaching and private study purposes. Any substantial or systematic reproduction, re-distribution, re-selling, loan or sub-licensing, systematic supply or distribution in any form to anyone is expressly forbidden.

The publisher does not give any warranty express or implied or make any representation that the contents will be complete or accurate or up to date. The accuracy of any instructions, formulae and drug doses should be independently verified with primary sources. The publisher shall not be liable for any loss, actions, claims, proceedings, demand or costs or damages whatsoever or howsoever caused arising directly or indirectly in connection with or arising out of the use of this material.

Meetings Program

CSJ/ACS JOINT CHEMICAL CONGRESS—1979

International Conference on Adhesion and Adsorption of Polymers

April 2-6, 1979

Honolulu, Hawaii

Sponsored by: Chemical Society of Japan and Division of Organic Coatings and Plastics Chemistry of the American Chemical Society

Conference Chairman: Dr. Lieng-Huang Lee

Co-chairmen: Dr. Warren H. Grant
Dr. Kazumune Nakao

FINAL PROGRAM

Monday Morning

SESSION 1: POLYMER SURFACE INTERACTIONS

Presiding: Dr. Lieng-Huang Lee

8:30 Introductory Remarks

8:40 (1) † Plenary Lecture: "Statistical Mechanics of Surface Tension and Adsorption", Professor I. Prigogine and A. Bellemans, Service de Chimie Physique II, Campus Plaine U.L.B., Boulevard du Triomphe, 1050 Brussels, Belgium

9:25 Discussion

9:35 (2) † Plenary Lecture: "Surface and Interfacial Tension of Polymer Melts and Solutions", Professor Toshio Hata, President, Gunma University, 3-39-22, Showa-cho, Maebashi-shi, Japan, 371

10:25 Discussion

10:35 Intermission

10:50 (3) † "Acid-Base Interactions at Interfaces", Professor Frederick M. Fowkes, Department of Chemistry, Lehigh University, Bethlehem, PA., 18015

† Invited paper

- 11:10 Discussion
 11:20 (4) "Surface Tension of Solids: An Equation of State Approach",
Dr. Souheng Wu, Experimental Station, E.I. DuPont de Nemours & Co., Wilmington, Delaware 19898
- 11:40 Discussion
 11:50 (5) † "A Role of Molecular Forces in Adhesive Interaction of
 Polymers", Professor V. A. Belyi, V. A. Smurugov and A. I. Sviridyonok,
 Institute of Mechanics of Metal-Polymer Systems of Byelorussian Academy of Sciences, Gomel,
 U.S.S.R.
- 12:15 Discussion

Monday Afternoon

SESSION 2: CHARACTERIZATION OF ADHESIVE INTERFACES

Presiding: Dr. Lieng-Huang Lee

- 2:00 Introductory Remarks
 2:10 (6) "Photoacoustic Spectroscopy for the Study of Adhesion and
 Adsorption of Dyes and Polymers", Dr. L. H. Lee, Webster
 Research Center, Xerox Corporation, Webster, New York
 14580
- 2:40 Discussion
 2:50 (7) "Adhesive-Adherend Bond Joint Characterization by Auger
 Electron Spectroscopy and Photoelectron Spectroscopy
 (ESCA)", *James S. Solomon* and Douglas Hanlin, University
 of Dayton Research Institute, 300 College Park Avenue,
 Dayton, Ohio 45469 and N. T. McDevitt, Air Force Materials
 Laboratory (MBM) Wright Patterson AFB, Ohio 45433
- 3:10 Discussion
 3:20 (8) "Techniques for Measuring Adhesive vs. Cohesive Failure",
Dr. Tennyson Smith and Pierre Smith, Rockwell International
 Science Center, 1049 Camino Dos Rios, Thousand Oaks,
 California 91360
- 3:40 Discussion
 3:50 Intermission
 4:00 (9) "Locus-of-Failure Analysis in Adhesive Bonding Research",
Dr. David W. Dwight, Department of Materials Engineering,
 Virginia Polytechnic Institute and State University, Blacks-
 burg, Virginia 24061
- 4:20 Discussion

† Invited paper

- 4:30 (10) "Dielectric Relaxation Gradients in an Adhesive Bond", *Dr. John L. Crowley* and Arthur D. Jonath, Lockheed Palo Alto Research Laboratory, 3251 Hanover, Palo Alto, California 94304
- 4:50 Discussion

Tuesday Morning

SESSION 3: POLYMERIC STRUCTURAL ADHESIVES

Presiding: Dr. D. H. Kaelble, Rockwell International, Thousand Oaks, California 91360

- 8:30 Introductory Remarks
- 8:40 (11) † "Fracture Mechanics and Adherence of Viscoelastic Solids", *Dr. Daniel Maugis*, and M. Barquins, Equipe de Recherche de Mecanique des Surfaces, du CNRS Bellevue, 1 Place A. Briand, 92190 Meudon-France
- 9:10 Discussion
- 9:20 (12) "The Viscoelastic Shear Behavior of a Structural Adhesive", Erol Sancaktar, J. S. Cartner, W. I. Griffith, and *Professor H. F. Brinson*, Department of Engineering Science and Mechanics, Virginia Polytechnic Institute and State University, Blacksburg, Virginia 24060
- 9:45 Discussion
- 9:55 (13) † "Surface Energetics and Structural Reliability of Adhesive Bonded Metal Structures", Dr. Dave H. Kaelble, Science Center, Rockwell International, 1049 Camino Dos Rios, Thousand Oaks, California 91360
- 10:20 Discussion
- 10:30 Intermission
- 10:45 (14) "Composition and Ageing of a Structural, Epoxy-based Film Adhesive", *Dr. C. E. M. Morris*, A. G. Moritz and R. G. Davidson, Materials Research Laboratories, Department of Defense, P.O. Box 50, Ascot Vale, Victoria, 3032, Australia
- 11:10 Discussion
- 11:20 (15) "Mechanical Characterization of Structural Adhesives", *Dr. D. L. Hunstron*, W. D. Bascom, E. E. Wells, J. D. Fahey and J. L. Bitner, Naval Research Laboratory, Chemistry Division, Washington, D.C. 20375
- 11:40 Discussion

† Invited paper

- 11:50 (16) "Crack Healing in Polymers", Dr. R. P. Wool, Department of Metallurgy and Mining Engineering, University of Illinois, Champaign, Illinois 61801
- 12:10 Discussion
- 12:15 (17) "Adhesive Characteristics of Ultraviolet Curable Resins", T. Kabayashi and K. Nate, Production Engineering Laboratory, Hitachi Ltd., 292, Yoshidayoshida-cho, Totsuka-Ku, Yokohama 294, Japan
- 12:30 Discussion

Tuesday Afternoon

SESSION 4: FRACTURE STRENGTHS OF POLYMERIC SYSTEMS

Presiding: Dr. K. Nakao, Japan

- 2:00 Introductory Remarks
- 2:10 (18) † "Criteria of Interfacial Fracture on Tensile Bond System", Mineo Masuoka and Kazumune Nakao, Osaka Prefectural Industrial Research Institute, 2-1-53, Enokojima, Nishi-ku, Osaka, Japan 550
- 2:40 Discussion
- 2:50 (19) † "Deformation and Shear Strength of FRP Adhesive Joints", Dr. Hiroo Miyairi, Hideaki Fukuda and Atsuyoshi Muramatsu, Institute for Medical and Dental Engineering, Tokyo Medical and Dental University, 2-3-10, Surugadai, Kanda, Chiyoda-ku, Tokyo, Japan 101
- 3:10 Discussion
- 3:20 (20) † "Stress Distribution and Strength in Shear on the Adhesive Lap Joint Loading Bending Moment", Professor Yukisaburo Yamaguchi and Susumu Amano, Department of Mechanical Engineering, Kogakuin University, 1-24-2, Nishi-shinjuku, Shinjuku-ku, Tokyo, Japan 160
- 3:40 Discussion
- 3:50 Intermission
- 4:10 (21) † "On Fracture Criteria in Peeling", Dr. Takashi Igarashi, Research Institute of Composite Materials, Faculty of Technology, Gunma University, 1-5-1, Tenjin-cho, Kiryushi, Gunma-ken, Japan 376
- 4:30 Discussion
- 4:40 (22) † "Superposition of Peel Rate, Temperature and Molecular Weight for T Peel Strength of Polyisobutylene", Toshiya Tsuji, Mineo Masuoka and Kazumune Nakao, Osaka

† Invited paper

Prefectural Industrial Research Institute, 2-1-53, Enkojima
Nishi-ku, Osaka, Japan 550

- 5:00 (23) "Adhesive Strength of Dental Fluid Acrylic Resin to Cross-linked PMMA", I. Harashima, S. Hirabayashi and T. Hirasawa, School of Dental Medicine, Tsurumi University, Yokohama, Japan 230
- 5:15 (24) "Adhesive Strength of Dental Self-Curing Acrylic Resin to Crosslinked PMMA", S. Hirabayashi, I. Harashima and T. Hirasawa, School of Dental Medicine, Tsurumi University, Yokohama, Japan 230
- 5:30 Discussion

Wednesday Morning

SESSION 5: MODIFICATION OF POLYMER INTERFACES

Presiding: Dr. L. H. Sharpe, Bell Laboratories, Murray Hill, New Jersey 07974

- 8:30 Introductory Remarks
- 8:40 (25) † Plenary Lecture: "Role of Interface in the Strength of Composite Materials", Dr. S. W. Tsai and H. T. Hahn, Air Force Materials Laboratory (MBM), Wright Patterson AFB, Ohio 45433
- 9:10 Discussion
- 9:20 (26) † Surface Modification of Polyethylene by Radiation-Induced Grafting for Adhesive Bonding", Dr. Shinzo Yamakawa, Ibaraki Electrical Communication Laboratory, Nippon Telegraph and Telephone Public Corporation, Takai, Ibaraki 319-11, Japan
- 9:40 Discussion
- 9:50 (27) † "Adhesive Tack", Dr. Robert Bates, Development Laboratory, Hercules Powder Co., Ltd., Church Manor Way, Erith, Kent, United Kingdom
- 10:10 Discussion
- 10:20 Intermission
- 10:30 (28) † "Adhesion Measurement of Polymer Films and Coatings with Special Reference to Photoresist Materials", Dr. K. L. Mittal and R. O. Lussow, IBM Corporation, Hopewell Junction, New York 12533
- 10:50 Discussion
- 11:00 (29) "Physico-Chemical Aspects of Thin Polymeric Film Adhesion to Metals", Dr. Pabitra Datta and Gregorz Kaganowicz,

† Invited paper

RCA Corporation, 201 Washington Road, Princeton, New Jersey 08540

- 11:20 Discussion
 11:30 (30) "The Effect of Silanes on Adhesion of Size-Free Glass Fibers in Thermoplastic Composites", *Dr. Barry Arkles* and William R. Peterson, Petrarch Systems, Inc. P.O. Box 141, Levittown, PA., 19059
- 11:50 Discussion
 12:00 (31) † "Adhesion of Filled Polyolefines to Metals and Glass", Professor V. A. Belyi, N. I. Egorenkov and A. I. Kuzavkov, Institute of Mechanics of Metal-Polymer Systems of Byelorussian Academy of Sciences, Gomel, U.S.S.R.
- 12:20 Discussion

Wednesday Afternoon

SESSION 6: KINETICS OF POLYMER ADSORPTION

Presiding: Dr. Warren H. Grant, National Bureau of Standards, Washington, D.C. 20234

- 2:00 Introductory Remarks
 2:10 (32) † Plenary Lecture: "Adsorption of Polymers from Solutions of Finite Concentration", Professor A. Silberberg, Weizmann Institute, Rehovot, Israel
- 2:40 Discussion
 2:50 (33) † "On the Structure of Boundary Layers of Polymers on Solid Surfaces", Professor Yury Lipatov, Institute of Macromolecular Chemistry, Academy of Sciences of Ukrainian SSR, 252160, Kiev, U.S.S.R.
- 3:10 Discussion
 3:20 (34) † "Selective Adsorption of Polymers From Solution", Dr. R. J. Roe, Department of Materials Science and Metallurgical Engineering, University of Cincinnati, Cincinnati, Ohio 45221
- 3:40 Discussion
 3:50 Intermission
- 4:00 (35) † "Reactions in Models of Bio-Membranes in Connection with Cell Motion", *Professor Albert Sanfeld*, Annie Steinchen, P. M. Bisch and W. Dalle Vedova, Free University Brussels-Chimie Physique II, Campus Plaine CP231, Boulevard de Tromphe, 1050 Bruxelles, Belgium
- 4:20 Discussion

† Invited paper

- 4:30 (36) "Kinetics of Cell Adhesion to a Series of Hydrophilic-Hydrophobic Polymers", *Dr. Jonathan J. Rosen* and Michael B. Schway, Department of Pathology and the Center for Bioengineering, University of Washington, Seattle, Washington 98195
- 4:50 Discussion
- 5:00 (37) "The Kinetics of Adsorption of Plasma Proteins to a Series of Hydrophilic-Hydrophobic Copolymers", *Dr. Thomas Horbett*, Department of Chemical Engineering, University of Washington, Seattle, Washington 98195
- 5:20 Discussion
- 5:30-7:00 Divisional Social Hour
- 7:30 Banquet

Thursday Morning

SESSION 7: CHARACTERIZATION OF ADSORBED INTERFACES

Presiding: *Dr. David L. Allara*, Bell Laboratories, Murray Hill, New Jersey 07974

- 8:30 Introductory Remarks
- 8:40 (38) "Surface Characterization of Hydrophilic-Hydrophobic Copolymer Model Systems", *Dr. Buddy D. Ratner* and Allan S. Hoffman, Department of Chemical Engineering BF-10, University of Washington, Seattle, Washington 98195
- 9:05 Discussion
- 9:15 (39) † "Adsorption Characteristics of Polymers at Liquid-Solid and Liquid-Liquid Interfaces by Interfacial Tension", *Professor Tsunetaka Matsumoto* and Katsuhiko Nakamae, Department of Industrial Chemistry, Faculty of Engineering, Kobe University, Rokko, Nada-ku, Kobe, Japan 657
- 9:40 Discussion
- 9:50 (40) † "Adsorption of Linear, Branched and Ionic Polymers Studied by Ellipsometry", *Dr. Akira Takahasi*, Masami Kawaguchi and Tadayo Kato, Chemistry Department of Industry and Resources, Faculty of Engineering, Mie University, Kamihama-cho, Tsu, Mie 514, Japan
- 10:15 Discussion
- 10:25 Intermission
- 10:40 (41) "The Direct Measurement of Forces Between PEO Adsorbed on Mica Surfaces in Aqueous Electrolyte", *J. Israelachvili*, R. K. Tandon and *Dr. L. R. White*, Research School of

† Invited paper

Physical Sciences, Australian National University, Canberra,
ACT, 2600, Australia

- 11:00 Discussion
 11:10 (42) "Adsorption Studies of Polymers on Metals by Fourier Transform Reflection Infrared Spectroscopy", Dr. D. L. Allara, Bell Laboratories, Murray Hill, New Jersey 07974
 11:30 Discussion
 11:40 (43) "Elucidation of the Structure of Silane Film at Metal-Polymer Interface", C. S. Paik Sung and S. H. Lee, Department of Materials Science and Engineering, Massachusetts Institute of Technology, Cambridge, Massachusetts 02139 and *N. H. Sung*, Department of Chemical Engineering, Tufts University, Medford, Massachusetts 02155
 12:00 Discussion

Thursday Afternoon

SESSION 8: ADSORPTION OF BIOPOLYMERS

Presiding: Dr. Warren H. Grant

- 2:00 Introductory Remarks
 2:10 (44) † "Adsorption of Proteins at Charged Solid-Liquid Interfaces", Dr. Willem Norde, Department of Physical and Colloid Chemistry, Agricultural University, Wageningen, The Netherlands
 2:40 Discussion
 2:50 (45) "The Adsorption of Human Serum Albumin and γ -Globulin on Hydrophobic and Hydrophilic Surfaces", *Dr. Warren H. Grant* and Ronald E. Dehl, National Bureau of Standards, Washington, D.C. 20234
 3:10 Discussion
 3:20 (46) † "Adsorption of Soluble Collagen and Adsorption to Adsorbed Soluble Collagen", Professor A. Silberberg, Weizmann Institute, Rehovot, Israel
 3:40 Discussion
 3:50 Intermission
 4:00 (47) "Adsorption of Bovine Serum Albumin on Polyoxymethylene Single Crystals", S. Shastri and *R. J. Roe*, Department of Materials Science and Metallurgical Engineering, University of Cincinnati, Cincinnati, Ohio 45221
 4:20 Discussion
 4:30 (48) † "Conformational Changes of Structures of Immuno-

† Invited paper

globulins at the Air-Water and Air-Solid Interfaces",
Professor V. V. Lavrentev, Second Moscow Medical
Institute, Moscow, U.S.S.R.

- 4:50 Discussion
5:00 Summarizing Remarks

Paper Soliciting Committee:

1. Dr. Lieng-Huang Lee
Bldg. W-114
Wilson Center for Technology
Xerox Corporation
Webster, New York 14580
U.S.A.
Telephone (716) 422-5021
2. Dr. Kazumune Nakao, Co-chairman of the Conference
3-12-1
Nakayama-sakuradai
Takarazuka-shi
Hyogo-ken, Japan, 665
3. Dr. Warren H. Grant, Co-chairman of the Conference
Institute for Materials Research
National Bureau of Standards
Washington, D.C. 20234
U.S.A.
Telephone (301) 921-3336

Coordinating Committee

1. Professor Akio Nakajima
Department of Polymer Chemistry
Kyoto University
Kyoto, Japan
2. Dr. B. A. Bolto
CSIRO, Division of Chemical Technology
P.O. Box 310
South Melbourne, Victoria 3205, Australia

Publications Committee

1. Dr. Lieng-Huang Lee

General Meeting Arrangements (Registration, Hotel and Travel)
Department of Meetings and Division Activities

American Chemical Society
1155 Sixteenth Street, N.W.
Washington, D.C. 20036, U.S.A.
Telephone (202) 872-4600

Publication

1. Preprints will be published by the ACS Division of Organic Coatings and Plastics Chemistry. The preprints volume can be purchased during the Conference.
2. The Proceedings will be published by Plenum Press approximately 6-8 months after the Conference.

COATINGS AND POLYMER PROGRAMS

Three short courses designed for specialists interested in coatings, polymers and rheology will be presented by the Coatings and Rheology Laboratory at Kent State University during May and June.

The first course to be presented will be "Dispersion of Pigments and Resins in Fluid Media", May 21-25, 1979. The chemical and mechanical aspects of dispersion ranging from principles of wetting and electrical effects to presentations on operation of a variety of dispersion equipment and plant practice will be described.

A repeat of last year's program, "Coatings and Polymer Characterization", will be held at the University, June 11-15, 1979. Lecturers will discuss the use of many instruments for the characterization of coatings and polymers, interpretation of data and introduction to recent analytical methods.

The final program for 1979, "Applied Rheology for Industrial Chemists", June 25-29, will be presented for the fourth consecutive year. Lecturers will present talks on the principles and applications of kinematic and dynamic rheological measurements on dispersions, polymers and liquids.

Additional information on these programs can be obtained by contacting Carl J. Knauss, Chemistry Department, Kent State University, Kent, Ohio 44242.