

International Symposium

**Solid State NMR Spectroscopy of
Polymers**

February 28-March 3, 1993

Sponsored by

The Division of Polymer Chemistry

AMERICAN CHEMICAL SOCIETY

(LOGOS)

Keystone Resort
Keystone, Colorado

(KEYSTONE LOGO)

Alan D. English
Du Pont
Central Research & Development
P.O. Box 80356
Wilmington, DE 19880-0356

Alan A. Jones
Department of Chemistry
Clark University
Worcester, MA 1610-1477

SOLID STATE NMR SPECTROSCOPY OF POLYMERS

The ACS Division of Polymer Chemistry, Inc. will sponsor an international symposium on "Solid State NMR Spectroscopy of Polymers" which is being organized by A. D. English (Du Pont) and A. A. Jones (Clark University). The three and one-half day program will include contributions from international leaders in the forefront of the use of NMR methods to characterize polymer structure and dynamics. Additionally, related topics such as molecular modelling and theory, molecular diffusion, concentrated solution behavior, and NMR methodology will be featured. Poster presentations will be an integral part of the meeting and are solicited.

Further information regarding the organizational aspects of the meeting, poster presentations, and the program can be obtained from: Mrs. Barbara D. Hogan, Du Pont, CRD, P. O. Box 80356, Wilmington, DE 19880-0356, Phone (302) 695-4394, FAX (302) 695-8207.

THE PROGRAM

Sunday, February 28, 1993

12:00 pm Registration: (Keystone Conference Center)

1:50 pm **A. D. English**
Introductory Remarks

SESSION TITLE Overviews and State-of-the-Art Research
Session Chairman: A. D. English

2:00 **Prof. H. W. Spiess**
Multidimensional NMR-Techniques for Studying
Structure and Dynamics of Polymers

2:50 Discussion

3:05 **Prof. A. E. Tonelli**
Crystalline Inclusion Compounds: An Opportunity to
Observe Isolated, Stretched Polymer Chains by
Solid State NMR

3:55 Discussion

- 4:10 **Break**
- 4:25 **Professor J. Schaefer**
Structure and Dynamics of Glassy Polymers by Double and
Triple Resonance NMR
- 5:15 Discussion
- 5:30 Reception

Monday, March 1, 1993

- 7:30 **Breakfast**

SESSION TITLE: Materials
Session Chairman: A. A. Jones

- 8:30 **Dr. F. Lauprêtre**
NMR Studies of Local Dynamics in Bulk Polymers at
Temperatures Above the Glass-Transition Temperature
- 9:00 Discussion
- 9:15 **Prof. P. T. Inglefield**
Structure and Dynamics in Blends
- 9:45 Discussion
- 10:00 **Break**
- 10:15 **Dr. N. Zumbulyadis**
Interface and Network Characterization in Advanced
Blends and Composites
- 10:45 Discussion
- 11:00 **Prof. E. Rössler**
Distributions of Correlation Times and Their Effect on $2H$
NMR Line Shape and Spin Lattice Relaxation
- 11:30 Discussion

SESSION TITLE: Theory and Simulation
Session Chairman: J. T. Bendler

- 2:00 **Prof. M. D. Ediger**
Local Polymer Dynamics in Solutions: NMR Experiments
and Computer Simulations
- 2:30 Discussion

- 2:45 **Prof. U. W. Suter**
Simulation of NMR Experiments from Atomistically Detailed
Models - Reality and Computations
- 3:15 Discussion
- 3:30 Break
- 3:45 **Prof. W. L. Mattice**
Molecular Dynamics Simulations for Interpretation
of the NMR of Polymers in Constrained Environments
- 4:15 Discussion
- 4:30 Invited and Contributed Posters
- 5:30-7:00 Wine and Cheese

Tuesday, March 2, 1993

- 7:30 Breakfast

SESSION TITLE: Diffusion and Imaging
Session Chairman: L. Williams

- 8:30 **Prof. C. A. Fyfe**
Multinuclear Spectroscopy-Based NMR Imaging Studies
of Polymer Systems
- 9:00 Discussion
- 9:15 **Prof. P. T. Callaghan**
Pulsed Gradient Spin Echo NMR and Dynamic NMR
Microscopy of Polymers
- 9:45 Discussion
- 10:00 Break
- 10:15 **Dr. A. N. Garroway**
Coherent Averaging Approaches for Solid State NMR
Imaging
- 10:45 Discussion
- 11:00 **Prof. J. L. Koenig**
Solid State NMR and Imaging of Elastomers
- 11:30 Discussion

Afternoon free for informal discussion of talks and posters

7:00 **Banquet**
 D. W. McCall
 Early Days of NMR: A Personal View

Wednesday, March 3, 1993

7:30 **Breakfast**

SESSION TITLE: Methods
Session Chairman: D. L. VanderHart

8:30 **Prof. W. S. Veeman**
 Triple Resonance Solid State NMR Experiments on
 Polymer Blends

9:00 Discussion

9:15 **Prof. T. Terao**
 Solid State NMR Studies of Inclusion Compounds

9:45 Discussion

10:00 **Break**

10:15 **Prof. G. E. Maciel**
 NMR Studies of Structure and Dynamics in Complex
 Solid Resins

10:45 Discussion

11:00 **Prof. E. T. Samulski**
 Recent Progress with RheoNMR

11:30 Discussion

11:45 **A. A. Jones**
 Closing Remarks

The return address on the front of the brochure should say:

Division of Polymer Chemistry, Inc.
American Chemical Society
Diane M. Morrill
1103 Hahn Hall
Virginia Polytechnic Institute & State University
Blacksburg, VA 24061-0212

~~HOUSING AND~~ REGISTRATION

The Keystone Resort and Conference Center is located just 75 miles west of Denver's Stapleton International Airport. Lodging arrangements must be made by the participant directly with Keystone Resort (Box 38, Keystone, CO 80435-0038; phone: 1-800-222-0188). Lodge rooms are available at a conference rate of \$80 (double occupancy) or \$150 (single occupancy). The special conference lodging rates are applicable for participants and their families from February 25-March 7, 1993 for those who wish to extend their stay. *The Keystone* Participants who require special dietary or other needs should indicate these requirements to Keystone Resort at the same time as they make their lodging reservations. Keystone will also be able to assist you with your airline reservations.

HOUSING
The symposium fee of \$400 includes registration for the symposium and all breakfasts, and a reception or dinner nightly. The registration fee for graduate students is \$300. Banquet, breakfast, and reception tickets will be available on site. Please send the completed registration form and remittance, made payable to ACS Division of Polymer Chemistry, Inc. to: Mrs. Barbara D. Hogan, Du Pont, CR&D, P.O. Box 80356, Wilmington, DE 19880-0356.

REGISTRATION FORM

Solid State NMR Spectroscopy of Polymers
February 28-March 3, 1993
Keystone Conference Center
Keystone, Colorado

NAME _____

Organization _____

Mailing Address _____

City _____ State _____ Zip _____

Tel: (Business) _____ Fax: _____

Conference **REGISTRATION**
Cancellation in writing after January 1, 1993 subject to a \$25 fee. No refunds after January 28, 1993.