

# RHEOLOGY BULLETIN

Publication of The Society of Rheology, Inc.

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Volume 40, No. 1

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April, 1971

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## 42nd ANNUAL MEETING FALL 1971

### *Time and Place*

Monday, October 25 through Wednesday, October 27. University Center, University of Tennessee, Knoxville.

### *Accommodations*

University Inn, and Sheraton Motor Inn are within walking distance of the University Center. The Bingham Medal Ceremony and Smoker will be held at the Sheraton Motor Inn Tuesday, October 26.

### *Call for Papers*

Submit two copies of a 200-word abstract to the chairman of the Program Committee before July 20, 1971. Equations are to be used sparingly. The Program Committee will review the abstracts for originality, relevance to Society purposes and technical character as a basis for acceptance.

The papers to be presented will be scheduled for 20 minutes followed by 10 minutes for discussion. Projection facilities will be available.

### *Symposium*

A one-day symposium, the Rheology of Fibers and Spinning, will be held during the meeting on Monday, October 25. This will include invited and contributed papers on (1) experimental studies and modeling of the spinning process, (2) measurement of elongational viscosity, (3) studies of orientation and crystallization during spinning and drawing and (4) mechanical properties of solid fibers and fabrics. Abstracts for contributed papers in these areas can be sent to D. C. Bogue, Symposium Chairman or J. L. White, Symposium Co-Chairman, Department of Chemical and Metallurgical Engineering, University of Tennessee, Knoxville, Tennessee 37916. Please note that the deadline for symposium papers is July 1, 1971.

### *Program Committee*

W. W. Graessley (Committee Chairman), Chemical Engineering Department, Northwestern University, Evanston, Illinois 60201.

E. A. Kearsley, Rheology Section, National Bureau of Standards, Washington, D.C. 20234.

A. S. Lodge, Engineering Mechanics Department, University of Wisconsin, Madison, Wisconsin 53706.

B. D. Marsh, Union Carbide Corporation, Bound Brook, New Jersey 08805.

### *Local Arrangements Committee*

J. L. White, Chairman

D. C. Bogue, Co-chairman

F. N. Peebles, Dean of Engineering

### *Instrument Exhibit*

An instrument exhibit will be held in conjunction with the meeting. It now appears that about ten companies will be involved.

### *Short Course*

There will be tutorial short course immediately prior to the annual meeting in Knoxville. We will have the particulars in the next bulletin.

## SIXTH INTERNATIONAL CONGRESS

### *Program*

R. S. Marvin of the National Bureau of Standards reports that the Sixth International Congress on Rheology will be held in Lyon, France September 4-9, 1972. The first circular of the Congress has just been issued, and if requested copies arrive at the AIP in time they will be included with this bulletin.

### *Charter Flight*

There is a possibility of a biorheology symposium overlapping the Sixth International Congress on Rheology. The Executive Committee has set tentative dates for the charter flight for August 26 to September 16 so as to encompass the Congress and also the symposium if it materializes. We want your reaction to these dates. Please contact R. E. Coulehan, 13 Allen street, Dobbs Ferry, New York 10522.



RHEOLOGY BULLETIN  
Raymond R. Myers, Editor  
Department of Chemistry  
Kent State University  
Kent, Ohio 44242

### CHANGE IN EDITORIAL POLICY

Economics require termination of the practice of supplying free reprints to authors who have not paid page charges.

Moreover, we regret that further austerity measures must be taken, effective with those manuscripts which have not yet been accepted. By vote of the Executive Committee we are now on a two-track system similar to (but more lenient than) the one adopted by our parent organization.

We must maintain a 70% content of paid pages in order to meet our budget responsibilities. Therefore we have requested the publisher to process manuscripts in two categories, depending on which authors honor page charges. As in the past, your editor will not know identities until after the scheduling.

We hope those authors who cannot secure financial support for their publications will take special pains to be terse.

We will continue the practice of supplying 50 free reprints for those contributors who pay page charges.

### NOMINATIONS

The nominating committee has presented the following slate:

*President:* F. R. Eirich, Polytechnic Institute of Brooklyn

*Vice President:* R. S. Rivlin, Lehigh University

*Editor:* R. R. Myers, Kent State University

*Secretary:* J. C. Miller, Union Carbide Corporation

*Treasurer:* E. A. Collins, B. F. Goodrich Chemical Co.

*Executive Committee at Large:*

A. N. Gent, University of Akron

W. W. Graessley, Northwestern University

E. A. Kearsley, National Bureau of Standards

J. R. Knox, Amoco Chemicals Inc.

Additional nominees may be named by petition forwarded to the Secretary, John C. Miller, Union Carbide Corporation, Bound Brook, New Jersey and signed by at least fifteen (15) members in good standing of the Society. Deadline is June 15, 1971.

### NOMENCLATURE

After one meeting and an exchange of correspondence the recently appointed Nomenclature Committee has approved some notations which are offered as an interim report by chairman Eirich as follows:

Tentative agreement has been arrived at between most Committee members on the following items: 'Steady Shearing Flow',  $\pi$ , Normal Stress Coefficients',  $\emptyset$  and  $\beta$ ; 'Stress Ratio',  $(p_{11}-p_{22})/2t_1$ ; 'Velocity Gradient',  $\gamma$ ; endorsement for the term 'Intrinsic Viscosity' and rejection of the term, 'Apparent Viscosity'; replacement of 'Real' and 'Imaginary' by 'In-phase' and 'Out-of-Phase'. Work on other definitions relating to Time Dependent, Dynamic, and Second Order quantities is in progress. Anyone who feels very strongly on these points is invited to communicate with the Committee Chairman, F. R. Eirich.

### RHEOLOGY RESEARCH IN UNITED STATES

The Executive Committee has authorized a small scale study of rheology in the United States. Please complete the questionnaire which accompanies this bulletin and return it to E. A. Collins as soon as possible.

### ANNOUNCEMENTS

The Division of Applied Mathematics of Brown University, Providence Rhode Island 02912, announces a conference on "The Future of Applied Mathematics" September 7-10. Write P. J. Davis for particulars and for travel fund requests.

The 13th Congress of Theoretical and Applied Mechanics will be held at Moscow State University from August 21 to 26, 1972. A limited number of participants can be accommodated in the hotels of the University. Between 200 and 250 contributed papers will be presented on analytical, solid and fluid mechanics, including applications. Initial selection from U.S. contributions will be made by the U.S. National Committee on theoretical and Applied Mechanics on the basis of abstracts. Send five copies of a 500-word summary to G. F. Carrier, Pierce Hall, Harvard University, Cambridge, Massachusetts 02138, before March 15, 1972. The General Secretary of the Organizing Committee is G. K. Mikhailov, Leningradskii Prospekt 7, Moscow A-40 U.S.S.R.



SOCIETY OF RHEOLOGY  
EXECUTIVE COMMITTEE

October 25, 1970

Nassau Inn  
Princeton, N.J.

Executive Committee Present: H. Markovitz, T. Smith,  
J. L. White, E. Collins, J. C. Miller, R. R. Myers.

Others Present: A. Metzger, R. A. Mendelson, G. Fulmer,  
W. Schowalter, D. Bogue, R. S. Marvin.

1. The meeting was called to order at 3:00 p.m.
2. Minutes of the previous meeting were approved as mailed.
3. Editor R. R. Myers made a report on the status of Transactions.
4. A meeting with Interscience about the lateness of the Transactions and the number of pages published resulted in a promise to improve the timing and increase the number of pages to 800.
5. Upon recommendation of the Editor, a motion to drop free reprints to authors was passed unanimously.
6. The Treasurer, R. Coulehan made a report on the finances which were reported to be favorable.
7. The Secretary reported that payment of page charges was below 50%, endangering our financial structure if this trend was allowed to go on too long.
8. Interscience is requesting that a review of the contract be done in the Spring.
9. The subject of the technical program diversity was discussed and while it is desirable to expand to other rheological fields only invited papers were suggested as a means.
10. The program for the Winter meeting was discussed by R. A. Mendelson.
11. The Local arrangements committee for the Princeton meeting led by W. Schowalter reported that everything was going smoothly and that over 200 rheologists had registered. The financial picture was not clear.
12. The Executive Committee passed a motion to thank Messrs. Schowalter and Cakmak.
13. J. L. White reported on the local arrangements for the Fall Meeting 1971 in Knoxville.

14. R. S. Marvin announced tentative dates for the International Congress in Lyon, France.
15. The new membership chairman, Glenn Fulmer gave the suggestion that a special category of membership be developed for retired rheologists.
16. Approval for R. Coulehan to set up a charter flight to France was given. Estimated fare is \$200.
17. The possibility of a Rheological Survey of rheologists in this country to provide data on rheological work was discussed. A motion to spend \$100 on the survey was passed unanimously.
18. A suggestion to hold the Winter 1972 meeting with the Division of High Polymer Physics was discussed.
19. A motion to change to Fall meeting for 1972 to January 1973 was passed.
20. A fee for invited speakers to meetings was discussed, but no action taken.
21. The meeting was adjourned at 6:10 p.m.

Respectfully submitted,  
J. C. Miller  
Secretary

SOCIETY OF RHEOLOGY  
BUSINESS MEETING

October 26, 1970

Princeton, N.J.

1. The meeting was opened by President Markovitz at 5:30 p.m.
2. The minutes were approved as printed in the Bulletin.
3. The report of the Secretary was accepted.
4. The budget for 1971 was explained by the Treasurer and accepted.
5. R. R. Myers, the Editor, discussed the problem of delayed publication. Interscience has agreed to improve publication time by expanding the Transaction to 800 pages in 1971.



- 6. Future meetings were announced by the President:
  - 1971 Winter — Salt Lake City, Utah
  - 1971 Fall — Knoxville, Tenn.
  - 1972 Winter — No decision
  - 1972 Fall — To be changed to January, 1973.

7. The 1972 International Congress will be held in Lyon, France, September 4-9. A charter flight organized by R. Coulehan was approved.

8. The President pointed out that two financial clouds had appeared. A new contract with Interscience must be negotiated and AIP is running a deficit which must be solved by increasing contributions from Societies or decreasing program. A committee with members from every Society has been formed to review AIP programs. The SOR representative is R. S. Marvin.

9. Membership in the Society has remained stable for three years. A program to improve the membership appears desirable.

10. A vote of thanks was taken for Messrs. Schowalter and Cakmak for the smooth operation of the local arrangements.

11. The meeting was adjourned at 6:20 p.m.

Respectfully submitted,  
 J. C. Miller  
 Secretary

### MEMBERSHIP

Anyone knowing a person or organization wishing to become a sustaining member of the Society, please contact the Membership Chairman.

The Membership Committee is being enlarged. Anyone wishing to join the Membership Committee should contact Glenn E. Fulmer (Chairman), W. R. Grace & Co., Clarksville, Maryland 21029.

### Application for Membership in the SOCIETY OF RHEOLOGY

I hereby desire to apply for membership in the SOCIETY OF RHEOLOGY dating from January 19.....

Name .....

(Include Title, e.g., Mr., Dr., Prof., Miss, etc.) Please print.

Mail Address .....

Mail Address .....

Professional Connection .....

Position .....

Chief Interest .....

Highest Academic Degree .....

Date .....

Enclose Remittance of \$10 for Regular Annual Dues or \$100 for Sustaining Annual Dues and Mail to:

SOCIETY OF RHEOLOGY  
 American Institute of Physics  
 335 East 45 Street  
 New York, New York 10017