

SENSOR GROUP NEWSLETTER

FALL 1991



Greetings from our Chairman

The Sensor Group is taking an active role in Society affairs by maintaining a respectable profile in the Society committees, especially the Symposium Subcommittee and Technical Affairs Committee. We are currently planning symposia at all Meetings up through the Toronto Meeting in the Fall of 1992. Some are Sensor Group-sponsored, some are joint with other Divisions. We are often the "lead" Group and have the greater responsibility.

Our membership is not growing spontaneously. We need ideas on how to recruit more *participating* members so that the Group can grow in responsibilities and in service for the Society. Dr. H. V. Venkatesetty has started a working party to come up with ideas that will allow our Group to grow into a Division. We also need new volunteers to organize symposia.

Our next Executive Committee Meeting will be in Phoenix on Sunday, Oct. 13 at 7 pm in the Russell C Room of the Hyatt Regency. Our Group Luncheon and Business Meeting is Tuesday, Oct. 15 at 12:15 in the Cowboy Artists Room of the Hyatt Regency. Note that the sensor symposia are at the Sheraton Phoenix because they are jointly organized and the "lead" group is using the Sheraton.

Richard P. Buck

Outstanding Achievement Award of the Sensor Group

The Sensor Group has established an award to recognize outstanding achievement in research and/or technical contributions to the field of sensors. The \$500 award will be presented in even-numbered years beginning in 1992 to a recipient recommended by the Sensor Group Award Committee. The recipient is to attend the Fall Meeting at which the award is given and present a lecture on the topics for which the award is made. A \$1500 grant from Corning, Inc. has been received to establish the fund for the Award. Suggestions for additional grants, which would be most helpful, are welcome and may be addressed to the Chairman or any of the Executive Committee members.

A new five-member Award Committee is to be appointed by the Sensor Group Chairman for each award period, with one of the five members reappointed from the previous committee for continuity. The Award Committee's choice is subject to approval by the Society's Honors and Awards Committee. A call for nominations will appear in the September, October, and November issues of the JOURNAL in odd-numbered years.

The assistance of all members of the Group in the nomination process for the 1992 Award is hereby requested. Nominations for the 1992 award will be open *only until January 1, 1992*. Look for the call in the Sept. - Nov. 1991 issues of the JOURNAL, and *please forward your nominations as directed in the call.*

1992 Award Committee members

Jiff Janata, Chair (University of Utah)
Mark Arnold (Ohio University)
Tony Ricco (Sandia National Labs)
Jim Sandifer (Eastman Kodak)
Dennis Turner (Past President, ECS)

Summary of Sensor Group Meetings in Seattle, October 1990

Executive Committee Meeting (Sunday, 10/14). Future symposia (see table) were discussed, as were ideas for increasing the Group treasury and obtaining travel grants for key symposium speakers. Limited funds mean symposium organizers may not promise travel funds without approval from the Executive Committee. Symposium proceeding volumes are one means of fund raising, but 20 manuscripts are necessary for break-even; when symposia are cosponsored by other divisions (many of them more wealthy than the Sensor Group), the share of the proceeds for our Group is even less. Dennis Turner was to sit in at the Technical Affairs meeting to determine if financial relief for the Group is obtainable. Ideas for expanding membership in the Group were discussed. The "Description of the Sensor Group" in the ECS booklet was discussed; this was assembled by Dennis Turner and Mike Butler and sent to the editor, Maria Heppel.

Luncheon and Business Meeting (Tuesday, 10/16). Dennis Turner described the two-year history of the Group, which now stands at 50 members (the Society has 3200). Ted Beck gave the report of the Nominating Committee (himself, Bill Smyrl, and Wayne Worrell), which met at the Montreal ECS Meeting. The slate of candidates, whose names and addresses appear below, were elected unanimously by voice vote. Future symposia were discussed and the Sensor Group Achievement Award was announced.

Eugene G. Gagnon (edited by A. J. Ricco)

New Symposium at May, 1992 Meeting to Focus on Materials Processing

The High Temperature Materials and Dielectric Science and Technology Divisions wish to announce a new symposium they are co-sponsoring entitled *Synthesis and Processing of High-Temperature Materials for the Year 2000*, to be held at the Spring, 1992 meeting in St. Louis. The symposium is a response to the National Research Council report, *Materials Science and Engineering for the 1990s: Maintaining Competitiveness in the Age of Materials*. This report states that synthesis and processing are "crucial to the continuing advancement" of new technologies that depend on high-tech materials, declaring that this is the "key, top-priority area of opportunity in materials science and engineering today." The organizers of the symposium, Mark Allendorf of Sandia National Laboratories, John Dismukes of Exxon Research and Engineering Co., and Prof. J. Bruce Wagner of Arizona State University, hope to stimulate interest in the area of new synthesis and processing technologies for high-temperature materials. All lectures at the symposium are invited. Internationally recognized speakers will give presentations that address the NRC study's invocation to continue to expand research on new synthesis and processing technologies. A representative of the White House Office of Science and Technology Policy will also be present to describe new federal initiatives related to materials research. Overview lectures in the fields of chemical vapor deposition, processing with ceramic powders, composites, plasma processing, and microwave processing will describe the status of research in these areas and point out critical areas of research. More specific aspects of each of these research areas will also be addressed, covering topics such as computational modeling in CVD, chemical vapor infiltration, surface chemistry, ultrafine powder synthesis, fiber formation, and plasma sintering.

The Executive Committee

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Upcoming Sensor Symposia at ECS and other Meetings

| Title | Sponsoring Organization | Date & Location | Contact* |
|---|--|--|--|
| Acoustic Wave Sensors for Corrosion Studies | ECS (Sensor/Corrosion) | Oct. 13-18, 1991 Phoenix | W. H. Smyrl, M. D. Ward, A. J. Ricco, N. R. Sorensen |
| General Session | ECS (Sensor) | Oct. 13-18, 1991 Phoenix | M. A. Butler |
| Thin-Film Sensors & Microstructures | AVS/Intl. Conf. on Metallurgical Coatings & Thin Films | April 6-10, 1992 San Diego | A. J. Ricco, S. Semancik |
| Electrochemical Sensors in Medical Science | ECS (Sensor) | May 17-22, 1992 St. Louis | D. J. Harrison, R. M. Wightman |
| Development & Applications of Sensors for Emerging Energy Technology Conversion | ECS (Battery/Energy Technology/Sensor) | May 17-22, 1992 St. Louis | M. E. Orazem, V. Jalam |
| High-Temperature Sensors | ECS (High-Temperature Materials/Sensor/Battery) | May 17-22, 1992 St. Louis | A. C. Khandkar, M. Liu, W. L. Worrell |
| Micromachining and Microstructures | ECS (New Technology/Sensor/Electronics/Dielectrics Science & Technology) | May 17-22, 1992 St. Louis | H. F. Gray, J. N. Zemel, P. W. Barth |
| 1992 Solid-State Sensor & Actuator Workshop | IEEE Electron Devices Society | June 21-25, 1992 Hilton Head Isl., SC | David S. Eddy GM Research Labs PO Box 9055 Warren, MI 48090 |
| 4 th Intl. Meeting on Chemical Sensors | | Sept. 13-17, 1992 Tokyo | N. Yamazoe, C. C. Liu |
| Piezoelectric Sensors | ECS (Sensor/Physical Electrochemistry) | Oct. 11-16, 1992 Toronto | A. J. Ricco, S. J. Martin, J. G. Gordon |
| Battery Sensors, End-of-Charge, and State-of-Charge Indicators | ECS (Sensor/Battery) | Oct. 11-16, 1992 Toronto | A. Salkind, W. Wruck, A. Winsel |
| Liquid/Liquid Interfaces | ECS (Physical Electrochemistry/Sensor) | Oct. 11-16, 1992 Toronto | P. Vanysek, R. P. Buck |
| General Session | ECS (Sensor) | Oct. 11-16, 1992 Toronto | R. P. Buck |
| Chemical Sensors | ECS/Electrochemical Society of Japan/Japanese Society of Applied Physics | May 16-21, 1993 Honolulu | M. A. Butler, N. Yamazoe, A. J. Ricco |

*Addresses for contacts are not given in this table if they can be found elsewhere in this Newsletter or in the issue of the JOURNAL having the Call for Papers for the appropriate Meeting.