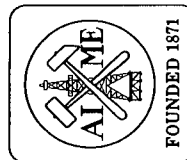


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THE
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of
AIME
PRESENTS
THE FOURTH ANNUAL
ELECTRONIC MATERIALS SYMPOSIUM

A one day symposium on electronic
materials featuring seven outstanding
authorities in their respective fields.

CABAÑA HYATT HOUSE
4290 EL CAMINO REAL
PALO ALTO, CALIFORNIA 94306

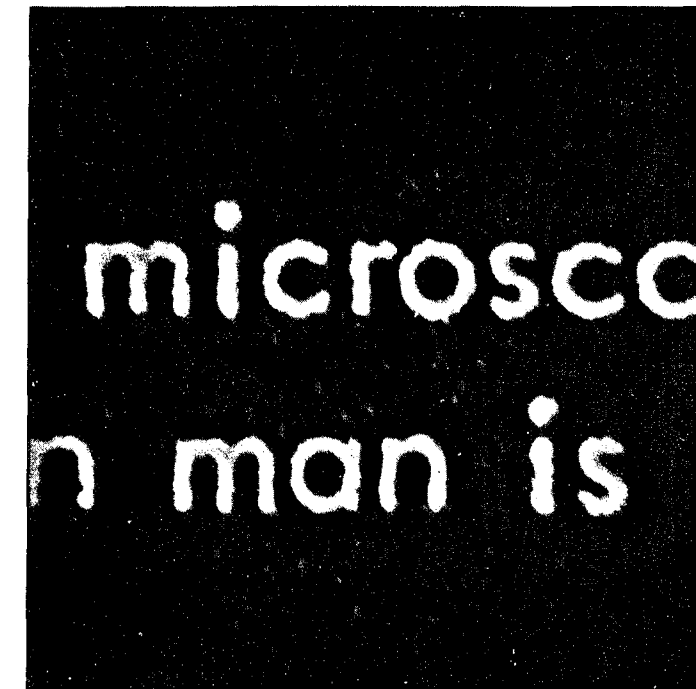
THURSDAY
MARCH 25, 1976
7:30 A.M.

PROGRAM

Thursday, March 25, 1976
Cabaña Hyatt House

- 7:30 Registration
- MORNING SESSION (Circus Maximus Central)
- Session Chairman: Dr. Max Lorenz
IBM Corporation
San Jose, California
- 8:30 Welcoming Remarks and Introduction
Dr. Dilip Rajdev, Chairman
Northern California Metallurgical Section of AIME
San Jose, California
- 8:40 "New Electronic Materials"
Dr. N. Bruce Hannay
Bell Telephone Laboratories
Murray Hill, New Jersey
- 9:30 "Materials and Processes Development -- A Device View"
Dr. James Early
Fairchild Semiconductor R & D Laboratories
Palo Alto, California
- 10:20 COFFEE BREAK
- 10:50 "Advances in High Resolution Lithography"
Dr. Alec Broers
IBM Corporation
Yorktown Heights, New York
- 11:45 LUNCHEON (Circus Maximus North)
- 12:20 Ross N. Tucker Memorial Award Presentation to Mr. Kim Warner Mitchell,
Department of Materials Science, Stanford University, Stanford,
California
- 12:30 "Project Cyclops - Extraterrestrial Communication"
Dr. Bernard M. Oliver
Hewlett-Packard Laboratories
Palo Alto, California
- AFTERNOON SESSION (Circus Maximus Central)
- Session Chairman: Dr. Gerald Stringfellow
Hewlett-Packard Laboratories
Palo Alto, California
- 1:30 "Electron Beam Studies of Surface and Interface Structure
in Electronic Materials"
Dr. Wilmer Bottoms
Varian Associates
Palo Alto, California
- 2:15 "Recent Developments in Electroluminescence - Applications
to Flat Display Devices"
Dr. Sanai Mito
Sharp Corporation
Tenri-Shi Nara, Japan
- 3:00 COFFEE BREAK
- 3:30 "Sputtered Coatings for Energy Related Applications"
Dr. John A. Thornton
Telic Corporation
Santa Monica, California
- 4:15 "Devices in Silicon Grown by the EFG Process"
Dr. Henry Kressel
RCA Laboratories
Princeton, New Jersey
- 5:00 HOSTED COCKTAIL PARTY
Cabaña Hyatt House (Circus Maximus North)

- VENDORS SHOW (Circus Maximus South)
- 8:00 - 5:00 Vendors Exhibits



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GENERAL INFORMATION

1. The registration fee for the symposium covers admission to symposium sessions, extended abstracts of symposium presentations, luncheon, a vendor's exhibit, and a portion of a hosted cocktail hour following the symposium. Physical limitations require that attendance be limited to the first 350 registrants.
2. Costs for the symposium have been kept to a minimum to encourage attendance. A surcharge will be required from those who do not preregister by Friday, March 12, 1976 because of added costs for arrangements after that date. To reserve your place at the symposium and luncheon, we urge you to register early by mail, using the form provided. No refunds of registration fees will be made after Friday, March 12, 1976.
3. During the symposium the second annual Ross N. Tucker Memorial Award will be presented to Mr. Kim Warner Mitchell of the Department of Materials Science, Stanford University, Stanford, California, for his work, "The Experimental and Theoretical Evaluation of the CdS/CdTe Heterojunction for Solar Cell Application".
4. We are honored to have Dr. Bernard M. Oliver of Hewlett-Packard Laboratories, as our luncheon speaker. His topic will be "Project Cyclops - Extraterrestrial Communication".
5. A feature of this symposium will be a vendor's exhibit. Informational displays on new materials and processing equipment will be presented by manufacturing representatives.
6. A hosted cocktail party will follow the final symposium presentation, providing an opportunity for informal discussion with symposium speakers and guests.
7. Registration material and extended abstracts of the symposium presentations will be available at the symposium. The opening session will begin promptly at 8:30 A.M.
8. Further questions regarding the symposium should be directed to: Dr. K. S. Sree Harsha, 215 Engineering Building, San Jose State University, San Jose, California, 95192. Telephone (408) 277-2446.

ABOUT THE SPEAKERS

DR. WILMER R. BOTTOMS received his B.S. degree in Physics from Huntingdon College and his Ph.D. degree in Physics from Tulane University. He was a member of the faculty of Princeton University where he was active in the fields of surface and interface Physics. He is presently the Engineering Manager of the Vacuum Division for Varian Associates in Palo Alto. He has been an active member of the American Vacuum Society and has served in a number of positions, including Chairman of the Greater New York Chapter and Editor of the AVS Monograph Series. He is a member of the Electronic Materials Committee of AIME.

DR. A. N. BROERS received his B.Sc. degree in Physics and Electronics from Melbourne University, and his B.A. and Ph.D. degrees in Electrical Engineering from Cambridge University. Since 1962, he has worked on electron beam fabrication, electron microscopy, ion beam systems, and more recently on general aspects of high resolution lithography. He joined IBM Research in 1965, and he is presently Manager of the Photon and Electron Optics Department, where he is engaged in research on the systems and processes used for ultraviolet, x-ray and electron beam lithography.

DR. JAMES M. EARLY received his B.S. degree in Pulp and Paper Manufacturing from the New York State College of Forestry. He received his M.S. and Ph.D. degrees in Electrical Engineering from Ohio State University. He joined the staff of Bell Telephone Laboratories in 1951 where he worked on grown junction and alloy germanium transistors and the intrinsic barrier transistor. His subsequent work was devoted to the development of diffused base germanium transistors, high frequency silicon transistors, solar cells, beam-lead sealed-junction devices. He became Director of Bell Laboratories' Allentown Electron Device Laboratory in 1964 and joined Fairchild Camera and Instrument Corporation in 1969. He is presently the Division Vice-President of the Research and Development Division, Memory and Logic Group at Fairchild Research and Development Laboratories, and he is responsible for development of new silicon integrated circuit technologies, charge-coupled device development and operations, mask making and mask technology development. He is a Fellow of IEEE, and he is Chairman of the Advisory Group on Electron Devices.

DR. N. BRUCE HANNAY received his B.A. degree in Chemistry from Swarthmore College and his M.A. and Ph.D. degrees in Physical Chemistry from Princeton University. He joined Bell Telephone Laboratories in 1944 and undertook chemical research programs involving fundamental studies of thermionic emission, electron attachment and ionization phenomena in molecules and the mass spectrographic analysis of solids. He has been in charge of groups engaged in chemical research in semiconductors, solid-state lasers and superconductivity in layered compounds. He is presently Vice-President of Research and Patents at Bell Telephone Laboratories. He has edited a number of books and is the author of a book, Solid State Chemistry. He serves on editorial boards of a number of professional journals. He has published over 50 technical papers in the areas of mass spectroscopy, molecular structure, semiconductors and solid state chemistry. He is a member of the National Academy of Engineering, a Fellow of the American Physical Society, American Academy of Arts and Science, Past President of the Electrochemical Society and serves in an advisory capacity to numerous educational, industrial and governmental organizations.

DR. HENRY KRESSEL received his B.A. degree from Yeshiva University, his M.S. degree from Harvard University and his M.B.A. and Ph.D. degrees from the University of Pennsylvania. He joined RCA in 1959, and he is presently Head of Semiconductor Device Research with responsibility in the area of silicon power and III-V compound devices. His research has led to contributions in the high frequency planar silicon transistors, high power varactor diodes, (Al,Ga)As-GaAs laser diodes, and other optoelectronic and power devices. He is a Fellow of IEEE and American Physical Society and is a member of the IEEE Quantum Electronics Council. He has received several awards including the 1974 David Sarnoff Medal for Outstanding Technical Achievement.

DR. SANAI MITO received his Doctor of Science degree in Physics from Osaka University. He held faculty appointments at the College of Engineering, Port Arthur, South Manchuria, and later as Professor at Osaka Imperial University. He joined the Hayakawa Electric Company in 1964 as the Director of the Central Research Laboratories. He is presently the Executive Director of Sharp Corporation and is in charge of their Advanced Planning and Research Center.

DR. BERNARD M. OLIVER received his B.A. degree in Electrical Engineering from Stanford University. He received his M.S., E.E., and Ph.D. degrees from the California Institute of Technology. He joined the technical staff of the Bell Telephone Laboratories in 1940 and worked on the development of automatic tracking radar, television transmission, information theory and efficient coding systems. In 1952 he joined Hewlett-Packard as Director of Research, became the Vice-President of Research and Development in 1957 and was named to the Board of Directors in 1973. He has authored numerous technical articles and holds over 50 patents. He is a member of the National Academy of Engineering and the National Academy of Sciences. He is the Past President of IEEE and is a member of the Science and Technology Advisory Committee to the California State Assembly.

DR. JOHN A. THORNTON received his B.S. and M.S. degrees in Mechanical Engineering from the University of Washington. He received his Ph.D. in Physics from Northwestern University. He joined the Litton Space Science Laboratories where he conducted research on plasma containment, plasma chemistry, gaseous discharges, and re-entry physics. In 1969, he joined Telic Corporation, where he has conducted research on vacuum coating processes, including dc, rf, and reactive sputtering, and he is presently Vice-President of Research and Development. He has authored or co-authored over 30 papers in the field of plasma physics and vacuum coating technology.

REGISTRATION FORM

1976 Fourth Annual AIME Electronic Materials Symposium

Name _____ Title _____
 Organization _____
 Mailing Address _____
 City _____ State _____ Zip Code _____

Registration Fee:

() AIME Member	\$15.00	Payment Received on or Before March 12, 1976	\$25.00
() Non-member	\$20.00	Payment Received After March 12, 1976	\$30.00
() Full-time Registered Student	\$10.00		\$20.00

Make checks payable to: "N. Cal. Met. Section, AIME," and send with the above information to: Dr. K. S. Sree Harsha, 215 Engineering Building, San Jose State University, San Jose, California, 95192. Do not send Purchase Orders. Others may register by supplying the information requested above and sending it with the registration fee.