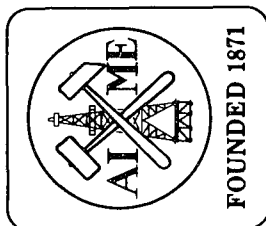
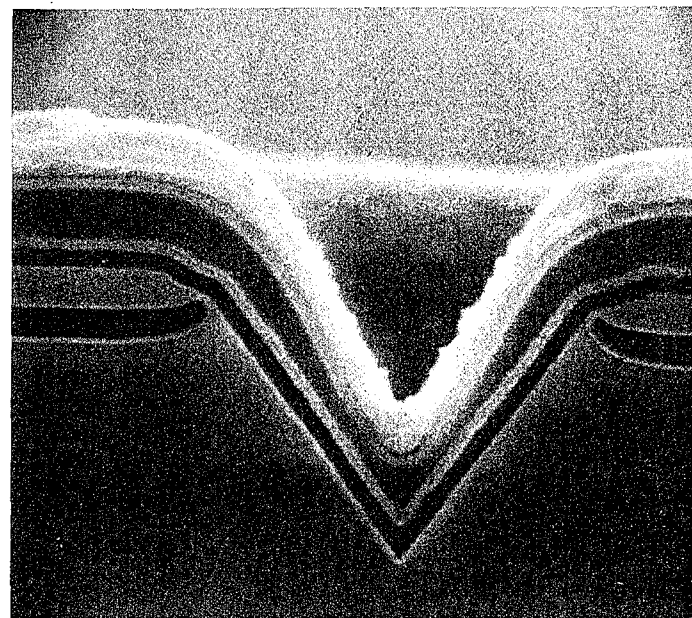


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THE
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 OF
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 PRESENTS
 THE SIXTH ANNUAL
 ELECTRONIC MATERIALS SYMPOSIUM

A One Day Symposium on Electronic Materials
 Featuring Outstanding Authorities
 in Their Respective Fields

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

TUESDAY
 MARCH 14, 1978

7:30 A.M.

PROGRAM

Tuesday, March 14, 1978

Cabaña Hyatt House

7:30 Registration

MORNING SESSION (Circus Maximus Central)

Session Chairman: Dr. Eugene Meieran
 Intel Corporation
 Santa Clara, California

8:30 Welcoming Remarks and Introduction
 Dr. Max R. Lorenz
 IBM Corporation
 San Jose, California

8:40 "Where is Silicon Technology Heading?"
 Dr. Robert N. Noyce
 Intel Corporation
 Santa Clara, California

9:30 "Iso-planar Technology and Material"
 Dr. Douglas L. Peltzer
 Fairchild Semiconductor
 Mt. View, California

10:20 COFFEE BREAK

10:50 "V-MOS Technology"
 Dr. Thurman J. Rodgers
 American Micro-Systems, Inc.
 Santa Clara, California

11:45 LUNCHEON (Circus Maximus North)

12:20 Ross N. Tucker Memorial Award Presentation to Berry L. Chin,
 Department of Materials Science, University of California,
 Berkeley, California

12:30 "UFO's - Borders of Science"
 Prof. Robert F. Creegan
 State University of New York
 Albany, New York

AFTERNOON SESSION (Circus Maximus Central)

Session Chairman: Dr. Robert Burnham
 Xerox Research Center
 Palo Alto, California

1:30 "Defect Characterization of Silicon"
 Dr. L. C. Kimerling
 Bell Laboratories
 Murray Hill, New Jersey

2:15 "Materials Aspects of LSI Device Reliability"
 Dr. Craig R. Barrett
 Intel Corporation
 Santa Clara, California

3:00 COFFEE BREAK

3:30 "Recent Advances in Electroluminescent Memory Devices"
 Dr. Vincent Marrello
 IBM Corporation
 San Jose, California

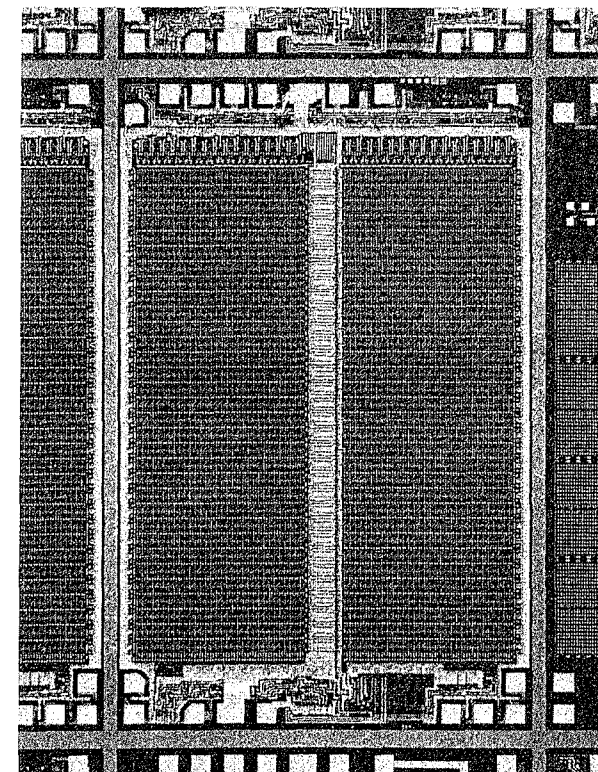
4:15 "Prospects for Large Scale Applications of Solar Cells"
 Dr. Paul Rappaport
 Solar Energy Research Institute
 Golden, Colorado

5:00 HOSTED COCKTAIL PARTY

Cabaña Hyatt House (Circus Maximus North)

VENDORS SHOW (Circus Maximus South)

8:00 - 5:00 Vendors Exhibits



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 Tuesday, February 28, 1978 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 Tuesday, February 28, 1978.
3. During the symposium, the fourth annual Ross N. Tucker Memorial Award will be presented to Berry L. Chin, Department of Materials Science, University of California, Berkeley, for his work on the characterization of materials for photovoltaic applications.
4. We are honored to have Professor Robert Creegan as our luncheon speaker. His topic will be "UFO's - Borders of Science."
5. A feature of this symposium will be a vendor's exhibit. Information displays on new materials, processing equipment and analytical instruments will be presented by manufacturing representatives.
6. A hosted cocktail party will follow the final symposium presentation, providing an opportunity for informal discussions 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 M. R. Lorenz, IBM Research Laboratory, Dept. K44, Bldg. 281, 5600 Cottle Road, San Jose, CA 95193. Telephone: (408) 256-4355.

ABOUT THE SPEAKERS

DR. CRAIG R. BARRETT received his Ph.D. degree in Materials Science from Stanford University in 1964. He spent one year at the National Physical Laboratory, England, as a NATO Fellow and then joined the faculty at Stanford University where he pursued research on the physical and mechanical properties of materials, defects in solids, and high rate physical vapor deposition. In 1974 he joined Intel where he has been involved with technology development, component packaging, and reliability engineering. He is currently Director, Quality Assurance/Reliability Engineering, for all Intel Components Divisions. Dr. Barrett has authored or co-authored over 40 technical publications and one textbook.

PROFESSOR ROBERT F. CREEGAN received his B.A. degree from Marietta College. He received his Ph.D. degree from Duke University in 1939. He has taught courses in Philosophy and/or Psychology at William and Mary, Carleton College, Whitman College and Bucknell University. Dr. Creegan joined the State University of New York at Albany in 1952 as Professor of Philosophy. He has also served as Chairman of the Department of Philosophy. He has published many articles and reviews in various fields of Philosophy and Psychology and is the author of a book entitled "The Shock of Existence." In recent years, Professor Creegan became active in the field of Unidentified Flying Objects. He has conducted interviews in the public and private sectors concerned with UFO reports in the USA, Great Britain, France and Canada. He has served on an investigative panel with some of the principal UFO investigators in the USA. Professor Creegan has presented a series of papers on the UFO problems. A paper entitled "The UFO and Theory of Knowledge" was presented in 1971 at a UFO Symposium at the University of Arizona. Since then he has contributed reports and discussions to the Bulletin of the National Investigations Committee on Aerial Phenomena. Professor Creegan has been teaching a pilot course on the UFO problems entitled "Borders of Science."

DR. LIONEL C. KIMERLING received S.B. and Ph.D. degrees from the Massachusetts Institute of Technology in Metallurgy and Materials Science in 1965 and 1969, respectively. He served in the USAF from 1969-1972 at Air Force Cambridge Research Laboratories in the Solid State Sciences Laboratory where he conducted research on radiation effects in semiconductor materials. He joined the Materials Physics Research Department at Bell Laboratories in 1972. His primary research interests involve defect phenomena in elemental and III-V compound semiconductor systems. His recent work includes studies of degradation mechanisms in GaAs heterostructure lasers, process induced defects in silicon, and analytical techniques for the electrical characterization of semiconductor materials. He is a member of the Sigma Xi, Phi Lambda Upsilon, AAAS, AIME, and the American Physical Society.

DR. VINCENT MARRELLO received his B.S. degree in Engineering Science from the University of Toronto in 1970 and his MS and PhD degrees in Electrical Engineering from the California Institute of Technology in 1971 and 1974, respectively. He joined the IBM San Jose Research Laboratory in 1975 where he is studying the properties of dielectric thin films and electroluminescent memory devices.

DR. ROBERT N. NOYCE received his B.A. degree from Grinnell (Iowa) College in 1949 and his Ph.D. degree in Physical Electronics at Massachusetts Institute of Technology in 1953. Upon completion of his schooling, he joined the Research Division of Philco Corporation where he worked mainly in developing high performance germanium surface barrier transistors. He joined the Shockley Semiconductor Laboratory of Beckmann Instruments in Palo Alto, California shortly after its formation in 1956. Here he worked toward the realization of diffused silicon devices. In 1959, Dr. Noyce was one of the founders of Fairchild Semiconductor where as Director of Research he was responsible for the activities that resulted in the commercial realization of the double-diffused mesa and planar silicon transistors. In 1959 he became General Manager of the Fairchild semiconductor operation and a Vice President of the Fairchild Camera and Instrument Corporation. In 1968, Dr. Noyce became one of the founders of Intel Corporation. Until 1975 he served as President of Intel and since then he has held the position of Chairman. Dr. Noyce holds 16 patents on semiconductor methods, devices and structures, including application of photoengraving to semiconductors and diffused junction isolation for I.C.'s. He also holds the basic patent relating to metal interconnect schemes which was a key contribution to integrated circuit technology. He has been cited by the National Association of Manufacturers, "In recognition of a distinguished contribution to the well being of mankind through scientific research and development," and received the Stuart Ballantine medal from the Franklin Institute for his, "Contributions to the integrated circuit technology." Dr. Noyce was elected to the National Academy of Engineering in 1969 and is a Fellow of the IEEE. He has served on the Board of Trustees of Grinnell College since 1962 and is a member of the Visiting Committees for Harvard, MIT, and Stanford.

MR. DOUGLAS L. PELTZER received his B.A. from Knox College in 1960 and his M.S. in Physics from New Mexico State University in 1963. In 1964 he joined the G.E. Advanced Computer Lab in Sunnyvale, California working on superconducting cryogenic memories. In 1967 he joined Fairchild R & D and participated in MOS and Bipolar process development including the Isoplanar process. Presently he is Technical Director for Fairchild Bipolar LSI, engaged in the production of Isoplanar RAMS, PROMS and high speed logic.

DR. PAUL RAPPAPORT received his B.S. degree in 1948 and his M.S. degree in 1949 from Carnegie Institute of Technology and his B.Sc. degree in 1972 from Arizona State University. Dr. Rappaport, Director of the Solar Energy Research Institute, is an internationally recognized pioneer in solar energy conversion and an authority on photovoltaic technology. Dr. Rappaport has helped formulate the national solar energy program through service on government research advisory committees for ERDA, NASA, the National Science Foundation, and the National Academy of Sciences. Before his appointment as SERI Director, Dr. Rappaport was Director of the Process and Applied Materials Research Center at RCA's David Sarnoff Research Laboratories in Princeton, New Jersey.

DR. THURMAN J. RODGERS received his A.B. degree in Physics and Chemistry from Dartmouth College and his M.S. and Ph.D. degrees in Electrical Engineering from Stanford University. He joined American Microsystems in Santa Clara, California in 1974. He presently heads the Memory Product Development Department which has responsibility for all semiconductor memory creation at AMI. Dr. Rodgers has published and holds patents on bipolar and MOS processes which use anisotropic etching. He has twice received an International Solid State Circuits Conference Best Paper Award.

REGISTRATION FORM

1978 Sixth Annual AIME Electronic Materials Symposium

Name _____ Title _____

Organization _____

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Registration Fee:

	Payment Received on or Before February 28, 1978	Payment Received After February 28, 1978
() AIME Member	\$15.00	\$25.00
() Non-member	\$20.00	\$30.00
() Full-Time Registered Student	\$ 7.50	\$17.50

Make checks payable to: "N. Cal. Met. Section, AIME," and send with the above information to: M. R. Lorenz, IBM Research Laboratory, Dept. K44, Bldg. 281, 5600 Cottle Road, San Jose, CA 95193. Do not send Purchase Orders. Others may register by supplying the information requested above and sending it with the registration fee.

PLEASE SHARE THIS INFORMATION WITH YOUR COLLEAGUES WHO MAY WISH TO ATTEND THE SYMPOSIUM.