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# SHORT-COURSE INSTRUCTORS

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*The scientists who will teach short courses  
in liquid phase epitaxy, surface analysis and ion implantation*

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A distinguished group of scientists, including a Von Hippel Award winner, have consented to teach a total of three short courses at this November's Annual Meeting in Boston.

## Surface Analysis

The short course on surface analysis techniques, which will present the conceptual and practical aspects of modern surface and thin film analysis, will be taught by Len Feldman of Bell Labs and Jim Mayer of Cornell.

LEONARD C. FELDMAN received his Ph.D. from Rutgers in 1967. Since then he has been a Member of the Technical Staff of Bell Laboratories, except for a one-year leave of absence at Aarhus University in Denmark. Throughout his scientific career he has been active in education: he is an instructor in Bell Labs' "In-hours" education program, and at Drew University and Cornell. His publications include a book, *Materials*

*Analysis by Ion Channeling*, with J.W. Mayer and S.T. Picraux, and numerous articles on materials science-related subjects. His most recent research interests include the structure and analysis of surfaces and interfaces and their interrelationship. He is a Fellow of the American Physical Society and a recipient of Bell Labs' Distinguished Technical Staff Award. Moreover, it was Len who, as Chairman of the Society's Education Committee, organized the expansion of the short-course element of the Annual Meeting, which began as an experiment with a single course last year and promises to grow further in coming years.

JAMES W. MAYER is Bard Professor of Materials Science at Cornell University. In 1981 he was honored with the MRS's most prestigious prize, the Von Hippel



JIM MAYER

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and I think that will lead to a deeper understanding of the problems which still remain."

Conference organizer Tom Tsakalakos of Rutgers said, "This uncommon gathering of scientists assured a uniform representation of all aspects of phase transformations and provides the basis for future collaboration between groups that traditionally have not established contacts before." Tsakalakos also pointed out that the location attracted a broadly international group.

### Soviet Couldn't Attend

Sadly, the meeting's keynote speaker, Armen Khachaturyan, and his wife

were refused permission by their government to attend. In a dramatic letter smuggled out of the Soviet Union and published in the last issue of the *Bulletin*, the scientist revealed that he is a refusenik, who has been denied permission to emigrate and subjected to various forms of harassment for seeking to do so. He told conference organizers he would participate in a hunger strike during the session's length. This led a score of those attending the conference to observe a limited fast in sympathy with Khachaturyan's plight. Also, a substantial majority of those who attended the meeting signed a letter of protest that was dispatched to the Soviet Academy of Science. [That letter is reprinted in these pages.]

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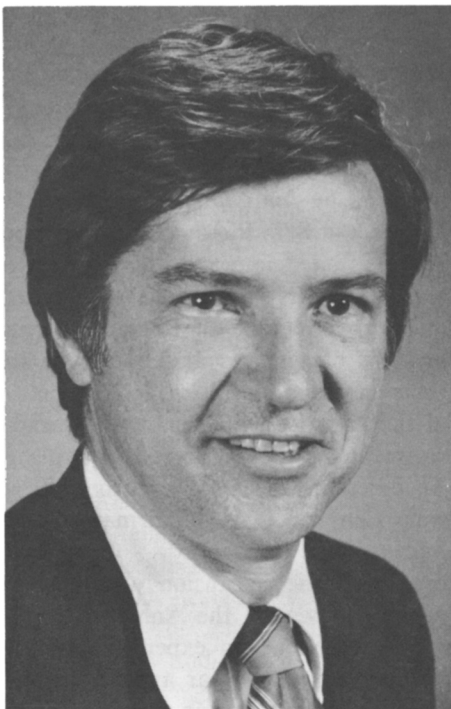
Award, for his outstanding lifelong contributions to materials science. He received his Ph.D. in physics from Purdue in 1960, and worked until 1967 at Hughes Research Laboratories. He then joined Caltech in the Electrical Engineering Department, where he was an instructor, while at the same time teaching scuba diving and serving as Master of Student Houses. He has been at Cornell since 1980. He has published more than 300 papers, co-authored three books, and co-edited three others.

## **Ion Implantation.**

The course entitled Ion Implantation: Principles and Practices will cover the fundamental techniques of ion implantation, the application of this technique to semiconductor and non-semiconductor materials, and the practical aspects of ion implantation equipment. The instructors are Jim Hirvonen and Tom Seidel.

J.K. HIRVONEN is vice president and technical director of Zymet, Inc., a concern founded to develop and build ion implantation equipment for non-semiconductor applications. Before that he was head of the ion implantation section of the radiation technology division of the Naval Research Laboratory, which he joined in 1971 after getting his Ph.D. in physics from Rutgers. A member of the Boehmische Physical Society, Jim has organized several symposia on ion beam modification of materials, edited two books on that subject, and authored more than 45 scientific papers.

T.E. SEIDEL received his Ph.D. from Stevens Institute of Technology in physics in 1965. The following year he joined Bell Laboratories in Murray Hill, NJ, where he worked on ion implantation technology, IMPATT microwave source devices, gettering effects and bipolar and CMOS technologies. In 1977 he held a



TOM SEIDEL

teaching-research position at Caltech's applied physics E.E. department. From 1980 through 1982 he served as CMOS technology supervisor at Bell Labs in Allentown, PA. Presently he is doing exploratory development in VLSI technology at Murray Hill. The author of some 50 publications and the holder of six patents, Tom is a member of ECS, IEEE and the Boehmische Society.

## **Liquid Phase Epitaxy**

The course on liquid phase epitaxy techniques is being offered for the second year, after its initial foray at last year's Annual Meeting proved so popular the concept was expanded. The man behind the successful course is Ralph Dawson.

L. RALPH DAWSON has been engaged in the growth of compound semiconductor material for 18 years. He earned his B.S. at the California Institute of Technology and his M.S. and Ph.D. at the University of Southern California. He spent eight

years at Bell Laboratories and is now involved in materials research at Sandia National Laboratories. He has used the LPE technique for the growth of a wide range of III-V compounds, including GaAs, AlGaAs, GaP, InP and GaSb, for a broad range of device applications, including Gunn devices, light emitting diodes, field effect and bipolar transistors, impatts, lasers and optical detectors. Currently, he is concentrating on the MBE growth of strained-layer superlattices in the InGaAs system. He is a member of the American Association for Crystal Growth, the Electronic Materials Committee and the GaAs Symposium Committee, as well as the MRS. He has authored 37 papers and holds two patents.

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