### International Conference on Semiconductor and IC Technology To Be Held in China

An International Conference on Semiconductor and Integrated Circuit Technology is planned for October 1986 in Beijing, China. The conference is being co-sponsored by the Chinese Institute of Electronics and by the Continuing Education in Engineering, University Extension of the University of California at Berkeley. The technical focus of this international forum will be a broad review of materials and processing issues associated with the fabrication of semiconductor and IC devices. The Beijing location will provide an important opportunity to establish contacts with a large number of Chinese scientists and technologists.

The conference committee includes: Zheng Wenhao (Chinese Institute of Electronics), Yu Zhongyu (Ministry of Electronics Industries, China), Wang Yang Yuan (Peking University), Takuo Sugano (Tokyo University), Michael Strathman (Charles Evans & Associates), Nathan Cheung (University of California, Berkeley), and James Stimmell (National Semiconductor). Papers are expected to address the following topics: lithography, ion implantation, diffusion/ oxidation, Si materials, rapid thermal processing, thin-film deposition, amorphous Si, MOS technology, bipolar technology, IC circuit design, yield/reliability, etching, packaging, process characterization, materials characterization, clean-room technology, electronic-grade chemicals, high-purity water, toxic-materials handling, fab safety and maintenance, education and training, fab management and superconductor electronics.

The conference is scheduled for a sevenday period beginning the week of October 19, 1986. It will feature four days of talks and poster sessions. There will be several plenary sessions devoted to opportunities for cooperation and joint ventures in China. Tours of factories, research institutes, universities, and other sites in the Beijing area will emphasize computer, communication, and IC fabrication facilities. Opportunities for additional interaction will be provided at the factory sites and research laboratories.

Contact Continuing Education in Engineering, University Extension, University of California, 2223 Fulton Street, Berkeley, CA 94720.

### Vivienne Harwood Mattox Appointed Short Course Manager

Vivienne Harwood Maddox has recently ben appointed short course manager of the Materials Research Society Short Course Program to further the Society's goal in providing broader and more comprehensive educational courses. In making the announcement, MRS Vice President Gordon E. Pike remarked, "Vivienne's extensive experience in teaching and management of continuing education in high-technology areas will be extremely valuable to MRS's rapidly growing Short Course Program."

Mattox brings to MRS a wide variety of experience in scientific research, teaching, vacuum system design, marketing, and in the development of short course programs. She received a BSc with honors in physics from the University of Exeter, England in 1959. In the early 1960s, she conducted research on the compressive and tensile strength of coal at the Mining Research Establishment of the National Coal Board in England while teaching part-time as a lecturer in physics. From 1961-1964, she was a full-time lecturer in physics at the Bristol College of Science and Technology, where she developed and taught a laboratory course in vacuum science and technology for college students and representatives from industry.

She became assistant professor in the electrical engineering department of the University of Alberta, Canada in 1964, where she developed a teaching laboratory and graduate course in vacuum science and technology. While vacuum design group leader for TRIUMF (Tri-University Meson Facility) at the University of British Columbia from 1966-1969, she designed and supervised the construction of the vacuum system of the accelerator. Following



Vivienne Harwood Mattox

her move to Bethesda, Maryland in 1969, she started her own marketing business in the real estate field.

From 1969-1984, Mattox devoted extensive time to the Education Committee of the American Vacuum Society and greatly expanded the educational services of the Society. She coordinated a book of laboratory experiments used for teaching vacuum technology and organized the first national AVS short course offering in 1970. As Education Committee Chairperson from 1974-1976, she supervised the production of the U. S. contribution of visual aids to the international project of IUVSTA, and initiated the production of Society monographs from short course notes. She was the short course coordinator for the American Vacuum Society from 1977-1983, during which time she was responsible for the dramatic growth of the AVS short course program. After a reorganization of the program to cope with its growth, Mattox assumed the role of technical marketing chairperson until moving to Albuquerque in 1984. She served as an elected member of the AVS Board of Directors from 1980-1981, and has received several awards from the American Vacuum Society for her contributions to the development of its short course program.

<section-header>1986 MRS<br/>Sphore Course<br/>An conjunction with theSpring Meeting<br/>palo Alto, CaliforniaLook for course<br/>details in the<br/>mail or contact<br/>MRS Headquarters<br/>at (412) 367-3003.

MRS BULLETIN, NOVEMBER/DECEMBER 1985, PAGE 25

## Some very interesting developments in Medium Energy Ion Scattering ask for your attention.

The depth resolution of the High Voltage Engineering System for Medium Energy Ion Scattering (MEIS) is 3-4 Å.

This figure is an order of magnitude beyond the capability of conventional Rutherford backscattering when using a surface barrier detector.

In surface analysis techniques depth resolution is not the only parameter of importance. Consider then a few other attractions, we offer as well:

 The energy resolution of our Toroidal Electrostatic Analyser is 4x10<sup>-3</sup> at an acceptance angle of 30°.

This large acceptance angle decreases the measuring time by approximately a factor of 30. As a consequence, damage due to ion beam dose and contamination is greatly reduced. The angle resolution after position sensitive detection is  $\leq 0.3^{\circ}$ .

- Our newly developed UHV target manipulator can rotate a sample around three independent axes by means of two linear movements and one rotary movement driven by stepping motors outside the vacuum. In addition to the rotations, there are provisions to shift the sample along 3 axes. The sample holder plugs into the manipulator head and has a heating arrangement for the sample of up to 1200°C.

 The sample loading chamber accepts 7 sample holders which can be inserted into the sample manipulator head without opening the UHV chamber.

The operating vacuum of the system is  $10^{-10}$  torr.

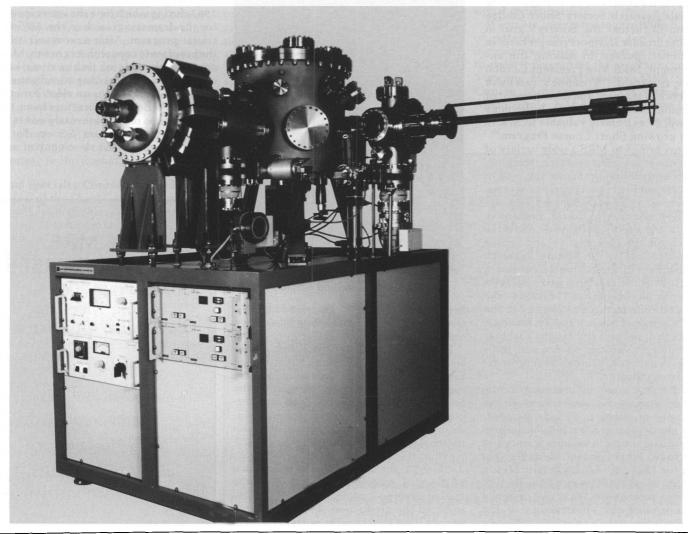
A visit to our <u>booth no. 909</u> at the <u>MRS show</u> is the most expeditious way to get specific data relevant to your work.



### HIGH VOLTAGE ENGINEERING EUROPA BV

P.O. Box 99 - 3800 AB Amersfoort The Netherlands Phone: 33 19741 - Telex: 79100

# For example, we have just improved depth resolution by an order of magnitude.



# High Voltage Engineering Europa B.V.

## **Medium Energy Heavy Ion Accelerators.**



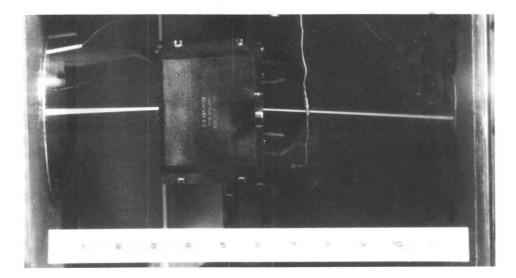
- Multi ion capability
- Utmost vacuum cleanliness
- Unprecedented energy stability Inventive quality engineering
- Optimum mass separation
- Field proven reliability

19114434

... then visit us at our booth no. 909 at the 1985 MRS show.

### **HIGH VOLTAGE ENGINEERING EUROPA B.V.**

P.O. Box 99 3800 AB Amersfoort The Netherlands Phone: 33-19741 Telex 79100



### Focused Ion Beams: Systems and Components

The picture shows 14 inches of a 10 keV  $Ar^+$  beam of the DP10 Duoplasmatron ion source with the ExB filter DPQ-522 providing mass dispersion and an offset from the straight-through axis. Beam extraction by the Emission Lens DPQ-525 with a wide control over brightness and emittance angle for matching, efficient transport and demagnification.

#### Accessories available as standard products:

- DPQ-536 Einzel lens for beams to 15 keV.
- DPQ-533 Microsecond pulser, orbital scan.
- RS 1200 X,Y Raster Scanner for beam handling from single lines to full rasters with gating. 10 bit precision, bipolar analog scan output. Available with amplifier RS1224 with 0 to ± 300V on 4 outputs with variable gain and zoom feature.

PHYSICON Corporation, 221 Mt. Auburn Street, Boston MA 02138 Phone: 617/491-7997