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Attended Pennsylvania State University, 1955–58; University of Cincinnati, 1959, and Westchester Community College, 1960. Joined IBM in 1960 where he worked in the field of photoconductors and the vapor growth of semiconductors. Presently engaged as Senior Research Assistant in studies of Ge half-cell reactions and in investigation of device characterization techniques.

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B.S. in Chemistry, 1958, Duke University; Ph.D. in Physical Chemistry, 1963, Cornell University. Was employed by Union Carbide Nuclear Co., Sterling Forest, New York, 1962 to 1964. Joined IBM Research at Yorktown Heights in 1964 to work on electroluminescence from wide band gap II-VI compounds. Current research interest is ion implantation doping of semiconductors. Member, American Chemical Society, AAAS, and Sigma Xi.

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B.S., 1956 and M.A., 1960, both in Mathematics, University of Detroit; Graduate work in math, 1960–1963, Wayne State University. Was a mathematical analyst at Bendix Aviation from 1956 to 1958. Joined IBM in 1963 at Endicott to work in the area of scientific programming. Currently, working in the advanced programming technology area, engaged in the development of programs to employ graphic devices as design aids for scientists and engineers. Member, Mathematical Association of America, and Association for Computing Machinery.

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*Erratum: P. 387, Fig. 5. At the bottom of the Figure, the words "Place Q address in MAR" should read "Place P address in MAR."

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