

Contributors to This Issue

WILLIAM O. BAKER, B.S., 1935, Sc.D. (hon.), 1957, Washington College; Ph.D., 1939, Princeton University. Bell Telephone Laboratories 1939—. A research physical chemist, Mr. Baker has served as Vice President in charge of research since 1955. His research work has been primarily concerned with investigation of the molecular structure and physical properties of polymers, particularly the fundamental constitution of synthetic rubbers and plastics. His ideas concerning microgel as a highly cross-linked giant molecule of distinctive properties, a concept new to science, have led to a better fundamental understanding of the behavior of man-made polymers, particularly synthetic rubbers. Mr. Baker has also collaborated in fruitful studies of the effects of such processes as molding and annealing of polystyrene, polyamides, cellulose esters, and other plastics, facilitating their wide use in communications equipment; molecular size and shape controls in polyethylene, qualifying it for cable sheath and insulation, and reactivity of saturated polyesters leading to new casting and encapsulating resins. Recently, he has collaborated in discovery and study of noncrystalline electronic semiconductors derived from conjugated polymers. He is a member of the President's Science Advisory Committee as well as Department of Defense and National Research Council Advisory Committees, including that for Research and Development in the Quartermaster Corps, and the Committee on Industrial Chemistry. During World War II he served with the Office of Scientific Research and Development and the Office of Rubber Reserve for the government. He later served on the Panel on Physical Chemistry for the Office of Naval Research, and on task forces of the Materials Advisory Board, N.R.C. Mr. Baker was elected Trustee of the Mellon Institute in 1958. He is also a member of the Industrial Research Institute and the Directors of Industrial Research. Member American Chemical Society, American Physical Society, American Society for Testing Materials.

WILLIAM B. CAGLE, B.S. in E.E., 1953, University of Oklahoma; Bell Telephone Laboratories, 1953—. Since graduating from the Communications Development Training Program, Mr. Cagle has been en-

gaged in design of semiconductor circuits in the Switching Systems department. Member I.R.E., Tau Beta Pi, Eta Kappa Nu, Sigma Tau, Phi Eta Sigma.

SIDNEY DARLINGTON, B.S., 1928, Harvard College; B.S. in E.E., 1929, M.I.T.; Ph.D., 1940, Columbia University; Bell Telephone Laboratories, 1929—. Mr. Darlington has been engaged in research in applied mathematics with emphasis on network theory and military electronics. He holds more than 20 patents in these fields. Fellow I.R.E., member American Rocket Society.

T. SPENCER GREENWOOD, B.S. in E.E., 1951, Northeastern University; M.S. in E.E., 1953, M.I.T.; Bell Telephone Laboratories, 1953—. Mr. Greenwood has been concerned with the development of memory systems for electronic switching systems. Member I.R.E., Tau Beta Pi, Eta Kappa Nu, Sigma Xi.

C. W. HOOVER, JR., B.E. in M.E., 1946, M.S., 1951 and Ph.D. in physics, 1954, Yale University; B.S. in E.E., 1947, M.I.T.; Bell Telephone Laboratories, 1954—. Mr. Hoover has been engaged in design of memory systems for use in electronic switching systems. He held the Yale University Sterling Fellowship and the National Research Council-Radio Corporation of American Fellowship in electronics. Member American Physical Society, Tau Beta Pi, Sigma Xi.

AMOS E. JOEL, JR., B.S., 1940 and M.S., 1942, M.I.T.; Bell Telephone Laboratories, 1940—. As Switching Systems Development Engineer, Mr. Joel is responsible for coordinating the exploratory development of a small electronic switching system. His earlier work includes relay engineering, work in the crossbar test laboratory and conducting fundamental development studies. During World War II he was engaged in studies of communications projects and shortly after the war he prepared texts and taught a course in switching design in the Communications Development Training Program. He was later concerned with fundamental switching engineering studies on electronic systems and in 1952 he was placed in charge of a group engaged in exploratory telephone switching development. Member A.I.E.E., I.R.E., Sigma XI, Association for Computing Machinery.

RAYMOND W. KETCHLEDGE, B.S. and M.S., 1942, M.I.T.; Bell Telephone Laboratories, 1942—. As Assistant Director of Switching De-

velopment III at Bell Laboratories, Mr. Ketchledge has responsibility for the development of electronic switching components, networks and memory systems. Earlier he worked on the development of infra-red detecting devices and sonar devices. He took part in the development of the Key West-Havana submarine cable system and the design of the L3 coaxial system. He was later responsible for gas tube and storage tube development. He was named Switching Systems Development Engineer in 1954 and assumed his present post in 1956. Senior Member I.R.E., member New York Academy of Sciences, Sigma Xi.

DOUGLAS H. PENNOYER, B.S. in E.E., 1924, Harvard University; Bell Telephone Laboratories, 1924—. He has specialized in design and development of dial central office switching equipment. He first was concerned with design of operating and testing circuits, and with a radar project during World War II. Subsequently, he has been primarily engaged in various phases of automatic message accounting and associated developments, of which the most recent is automatic number identification. Since 1946, Mr. Pennoyer has headed a group handling this work. Member A.I.E.E.

ROBERT E. STAEHLER, B. of E.E., 1947, C.C.N.Y.; M.E.E., 1948, Polytechnic Institute of Brooklyn; Bell Telephone Laboratories, 1948—. Mr. Staehler first worked on development of local signaling systems, guided missile trainer studies and a voice frequency toll signaling system. He was engaged in exploratory development of electronic switching during the period immediately preceding his appointment as Switching Systems Development Engineer in 1956. In his present post, Mr. Staehler is responsible for work on memory systems for electronic switching systems. He was an instructor in the Communications Development Training Program and the Polytechnic Institute of Brooklyn in 1950 and 1951, teaching courses in electrical engineering. Member I.R.E., Tau Beta Pi, Eta Kappa Nu, Sigma Xi.

M. DEAN UNDERWOOD, B.S., 1952, Pennsylvania State University; Bell Telephone Laboratories, 1952—. Mr. Underwood was first engaged in studies of minority carriers in silicon and germanium. He later worked on development of improved point contact diodes and now is concerned with design of transistor circuits for electronic central offices. Member I.R.E., Phi Eta Sigma, Sigma Pi Sigma.

BERNARD J. YOKELSON, B.S. in E.E., 1948, Columbia University; M.E.E., 1954, Polytechnic Institute of Brooklyn; Bell Telephone Labo-

ratories, 1948—. Mr. Yokelson's early work was concerned with the L1 coaxial cable system and microwave propagation studies. He later worked on a multi-frequency receiver and on military projects, including Nike. He is at present in charge of a group engaged in design of semiconductor circuits for electronic switching systems. Member A.I.E.E., I.R.E., Tau Beta Pi, A.A.A.S., Sigma Xi.