



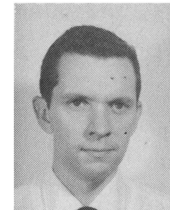
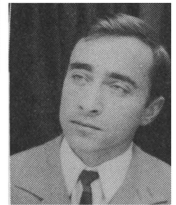
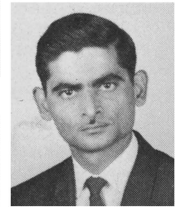
AUTHORS — JANUARY 1971

REACTORS

THE SEFOR MINIMUM CRITICAL CORE

Larry Noble (top left) (PhD, nuclear engineering, University of Michigan, 1965) has been employed by General Electric since 1965. He was previously engaged in the specifications of the SEFOR experimental data. Paul Greebler (center left) (PhD, physics, Rutgers University, 1954) is manager of the Nuclear Engineering Subsection at General Electric's Breeder Reactor Development Operation. He is directing reactor physics design and methods development activities in support of the development and design of fast breeder reactor systems. G. R. Pflasterer, Jr. (bottom left) (PhD, Stanford University, 1966) has worked with control system and core design at General Electric since 1955. Since 1964, he has been engaged in planning and executing the SEFOR experimental program, becoming SEFOR R&D program project engineer in 1967. B. U. B. Sarma (top right) (PhD, University of Maryland, 1968) is employed by General Electric and is pursuing his current interests of experimental fast reactor physics and reactor dynamics at the SEFOR reactor site. Detlev Wintzer (bottom right) (PhD, Karlsruhe University, Germany) contributed to SEFOR experimental program planning and data analysis during a 1½-year stay in the United States. He is presently in charge of the analysis of SEFOR experimental data at Karlsruhe.

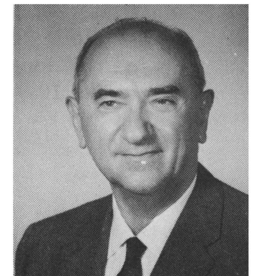
*L. D. Noble
P. Greebler
G. R. Pflasterer, Jr.
B. U. B. Sarma
D. Wintzer*



FISSION PRODUCTS IN REACTOR DYNAMICS

Jan S. Woyski (MS, nuclear engineering, University of California at Los Angeles, 1964) is a consultant to Bechtel Corporation for nuclear power projects. While at McDonnell-Douglas (1963-1969) he was responsible for the IR&D project on nuclear engine dynamics, including neutronic coupling in rocket clusters. Prior to that, he was active in the electrical power field and in the introduction of computer control.

Jan S. Woyski



THE EFFECT OF A METALLURGICAL PHASE CHANGE IN FUEL ON THE POWER COEFFICIENT OF EBR-II

John K. Long (PhD, Ohio State University, 1953) was for many years the manager of Argonne National Laboratory's Fast Reactor Critical Facility, ZPR-3. For the past three years he has been associated with EBR-II, doing analysis of feedback effects and other reactor physics studies.

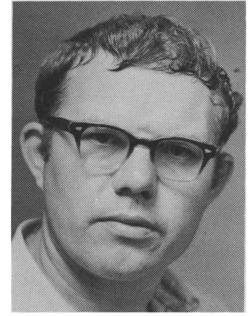
John K. Long



A PROPOSAL FOR USING NUCLEAR REACTORS AS THERMAL RADIATION SOURCES

K. Almenas (PhD, University and Polytechnic of Warsaw, 1968) worked in the Nuclear Engineering Division at Argonne National Laboratories from 1957 to 1965 and attended the International School of Nuclear Science at Argonne from 1957 to 1959. He has been on the nuclear engineering faculty at the University of Maryland since 1968.

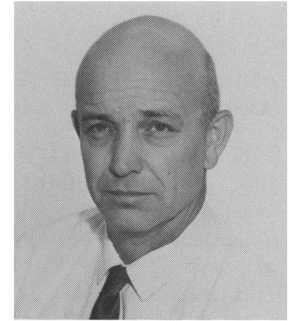
K. Almenas



ON-LINE NOBLE GAS FISSION PRODUCT MONITORING IN EXPERIMENTAL BREEDER REACTOR II

G. S. Brunson (BS, USMA, MS, Princeton) came into the nuclear business through the military weapons program. He has been with Argonne National Laboratory at the National Testing Station since 1954 with the exception of a year in Lisbon (as an IAEA technical assistance expert) and two years in Vienna (at IAEA Headquarters). Other interests are delayed neutrons, neutron chain kinetics, and the promotion of nuclear programs in developing countries.

G. S. Brunson

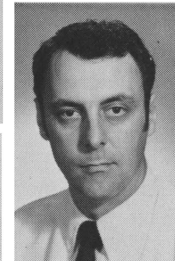
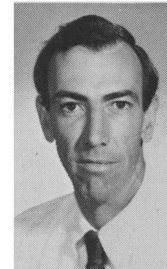


FUELS

PREDICTION OF THE IRRADIATION PERFORMANCE OF COATED PARTICLE FUELS BY MEANS OF STRESS-ANALYSIS MODULES

J. L. Kaae (top left) (PhD, University of California at Los Angeles, 1965) has been with the materials research group at Gulf General Atomic since 1967. Prior to that he was a postdoctoral fellow at the Welding Institute, Cambridge, England. D. W. Stevens (right) (BS, San Diego State, 1959) has been involved with the development and evaluation of high-temperature nuclear fuel materials since 1963. C. S. Luby (bottom left) (MS, San Diego State, 1964) is leader of the Fuel Irradiations and Design Section at Gulf General Atomic. He has 10 years experience in coated particle fuel development and irradiation testing.

*J. L. Kaae
D. W. Stevens
C. S. Luby*



THERMAL EXPANSION OF URANIUM AND TANTALUM MONOCARBIDES UP TO 2700°C

Hans K. Richards (PhD, physics, University of Hamburg, 1930) worked from 1955 to 1967 at Argonne National Laboratory where his interests were experimental research of fast neutrons, reactor and reactor safety calculations, thermionic energy conversion, and physical properties of reactor fuels. At present he is a consultant physicist in several fields of nucleonics and energy conversion.

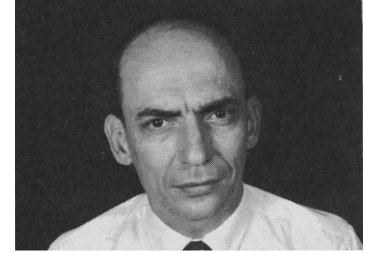
Hans K. Richards



DEVELOPMENT OF AN ULTRAFINE GRAIN SIZE TYPE-316 STAINLESS-STEEL CLADDING

G. A. Reimann

George A. Reimann (BS, metallurgy, Pennsylvania State University, 1956) is in the Metals and Ceramics Division of the Oak Ridge National Laboratory. His present interests include fabrication of stainless-steel tubing, with emphasis on developing structures and properties tailored to reactor applications.



MATERIALS

ANALYSIS OF CORROSION OF STAINLESS STEEL IN A SODIUM AND HIGH RADIATION ENVIRONMENT

*J. N. Anno
J. A. Walowit*

J. N. Anno (left) (PhD, physics, The Ohio State University, 1965) is an associate professor of nuclear engineering and director of the Laboratory of Basic and Applied Nuclear Research at the University of Cincinnati. His previous experience includes 17 years as a research scientist at the Columbus Laboratories of Battelle Memorial Institute. J. A. Walowit (PhD, chemical engineering, Rensselaer Polytechnic Institute, 1963) is a senior research scientist at Mechanical Technology Incorporated. His previous experience includes six years of research at Battelle. The authors have collaborated on a number of projects applying the principles of mechanics to atomic energy problems.



RADIATION

IONIZING RADIATION EFFECTS IN LITHIUM NIOBATE

*William Primak
T. T. Anderson
S. L. Halverson*

William Primak (left) has been investigating radiation effects at Argonne National Laboratory since 1946. T. T. Anderson (top right) joined Argonne National Laboratory in 1959. Since 1967, he has been the principal investigator for developing acoustic techniques to detect boiling of sodium coolant in fast breeder reactors. S. L. Halverson (bottom right) has been with Argonne National Laboratory since 1963. He has been mainly concerned with electronic instrumentation employed in the study of low energy plasmas contained in microwave cavities.



TECHNIQUES

A DUAL SPECTRUM CONCEPT FOR LMFBR FUEL ASSAY

Charles Kelber

Charles Kelber (PhD, physics, University of Minnesota, 1951) joined Argonne National Laboratory in 1955. He has been active in research and test reactor development (ARGONAUT, Mighty Mouse, AHFR, AARR), reactor theory and calculational methods, and reactor safety. His current interests include applications of Monte Carlo analysis and reactor fuel safeguards.

