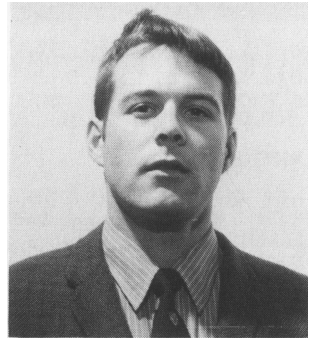
nuclear technology

AUTHORS — JANUARY 1974

FUEL CYCLES

TIMING THE UTILIZATION OF RECYCLE FUELS IN HIGH-TEMPERATURE GAS-COOLED REACTORS

F. J. Homan



F. J. Homan (BMetE, Cornell University, 1963) has been at Oak Ridge National Laboratory since 1967. His areas of interest include both economic and performance evaluations of nuclear fuels.

CHEMICAL PROCESSING

APPLICATION OF AMBERLITE XE-270 RESIN TO PURIFICATION OF NEPTUNIUM

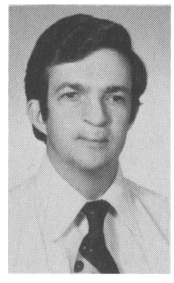
Wallace W. Schulz

Wallace W. Schulz (BS, chemistry, University of Nevada) has nearly 25 years of experience at Hanford in nuclear fuel reprocessing research and development. Now a staff chemist with the Atlantic Richfield Hanford Company, his current research interest is in the development of high-temperature schemes for converting Hanford's in-tank solidified wastes to glass-like products.

FUELS

A COMPARISON OF SPHERE-PAC AND PELLET $(U, Pu)O_2$ FUEL PINS IN LOW-BURNUP INSTRUMENTED IRRADIATION TESTS

R. B. Fitts
F. L. Miller

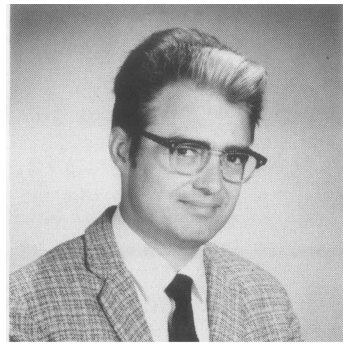


Robert B. Fitts (left) (MS, metallurgical engineering, North Carolina State College, 1962) has been with Oak Ridge National Laboratory for 11 years and is presently on leave of absence, working with the Nuclear Power and Reactors Division of the International Atomic Energy Agency in Vienna, Austria. His areas of interest are the fabrication and in-reactor performance of nuclear reactor fuels. Forest L. Miller, Jr. (MS, statistics, Purdue University, 1959) is a consulting statistician at Oak Ridge National Laboratory, working with scientists in a wide range of disciplines.

MATERIALS

TRITIUM IN FUSION POWER REACTOR BLANKETS

R. G. Hickman



Robert G. Hickman (PhD, University of California, Berkeley, 1963) is employed at the Lawrence Livermore Laboratory in its Chemistry and Materials Science Department. For eight years he worked in the Light Isotopes Group, studying the chemistry of helium, deuterium, tritium, and lithium. For the past 18 months, he has been applying this experience to the expected problems in CTR.

NEUTRON FLUENCE AND ATOMIC DISPLACEMENT RATES FOR GRAPHITE IRRADIATIONS

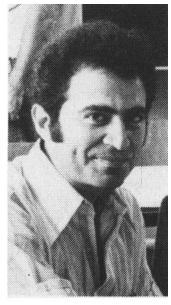
W. C. Morgan

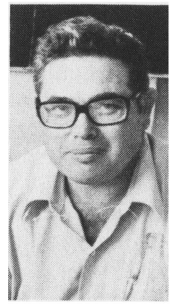
W. C. Morgan (BA, Linfield College, 1959) has been actively involved in neutron fluence measurements and the analysis of radiation effects, primarily in regard to irradiations of nuclear graphite. He is currently engaged in the projection of radiation-induced changes in graphite components of HTGR and fusion reactors and is participating in the development of ASTM Standards for graphite dosimetry and HTGR graphite components.

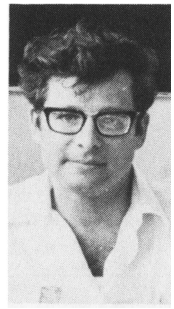
INSTRUMENTS

GAMMA GAUGE FOR THE CONTROL OF INTERZONE LAYER IN AN EXTRACTION TOWER

E. Elias
Y. Segal
A. Notea





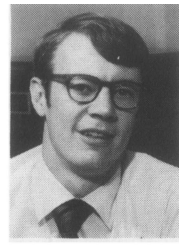


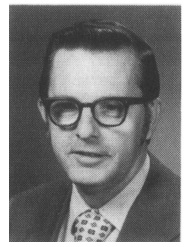
E. Elias (top) (BSc, chemical engineering, MSc, nuclear engineering, Technion—IIT, Haifa, Israel, 1971) is working toward his DSc thesis on the uses of primary and scattered photon fluxes for gauging in industry. Y. Segal (center) (DSc, nuclear science, Technion, Haifa, Israel, 1964) is a member of the academic staff of the Department of Nuclear Engineering in the Technion—IIT. His interests are in the applications of radiation techniques in industry. A. Notea (bottom) (PhD, physics, Hebrew University, Jerusalem, Israel, 1969) is senior lecturer in the Department of Nuclear Engineering, Technion—IIT. For the past 12 years, he has been involved in developments of radiation-measuring techniques.

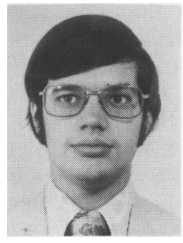
TECHNIQUES

INTERCOMPARISON OF NONPERTURBING TECHNIQUES FOR INFERRING THE REACTIVITY OF FAST REACTORS

A. R. Buhl
J. C. Robinson
E. T. Tomlinson







Anthony R. Buhl (top) (BS, 1963; MS, 1964; and PhD, 1967, nuclear engineering, University of Tennessee) is acting chief of the Core Design Branch, U.S. Atomic Energy Commission. Prior to joining the USAEC in January 1973, he was at Oak Ridge National Laboratory, where he was involved in the development of a subcriticality monitoring system for LMFBRs, and in computational methods development for fast reactor kinetics and design applications. Prior to joining ORNL, he was a group leader at the Nuclear Defense Laboratory and was involved in a variety of radiation transport problems. James C. Robinson (center) (PhD, University of Tennessee, 1966) is a professor in the Nuclear Engineering Department of the University of Tennessee. A consultant of the Instrumentation and Controls Division at Oak Ridge National Laboratory, he is primarily concerned with the theoretical aspects of reactor kinetics and dynamics. Edward T. Tomlinson (bottom) (BS, nuclear engineering, University of Tennessee, 1972) is presently working at Oak Ridge National Laboratory in the Neutron Physics Division under a graduate assistantship while studying for his Masters degree at the University of Tennessee.

INSTRUMENTS

A NEW CARBON-ACTIVITY METER FOR HIGH-TEMPERATURE SODIUM

W. E. Ruther
S. B. Skladzien
M. F. Roche
J. W. Allen

W. E. Ruther (seated left) (MS, Illinois Institute of Technology, 1949) is a staff member of the EBR-II Reactor Project at Argonne National Laboratory. S. B. Skladzien (standing) (MS, DePaul University, 1962), M. F. Roche (right) (PhD, University of Missouri, 1968), and J. W. Allen (center) (BA, Earlham College, 1957) are staff members of the Chemical Engineering Division at Argonne. Their primary field of interest is the interactions of impurities in sodium with materials of construction.

Dr. Karl Wirtz, Associate Editor for Europe

We are pleased to announce the appointment of Dr. Karl Wirtz as Associate Editor for Europe. Dr. Wirtz brings a history of past scientific contributions and service which make this additional service to the American Nuclear Society exceptionally promising.

As Associate Editor, Dr. Wirtz will encourage the submission of papers from European authors to *Nuclear Technology* and will assist authors with problems of format, language, and procedures. Papers from Europe are to be submitted directly to Dr. Wirtz in Karlsruhe:

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The technical review process will remain quite the same as presently used. Reviewers from around the world are used in our present procedures. We hope to enhance this international flavor of the Journal with more authors and more technical reviewers from outside the United States.

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