



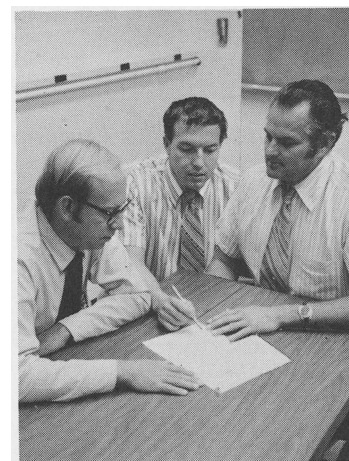
## AUTHORS — MARCH 1973

### REACTORS

#### **BREAKDOWN PULSE NOISE IN INSULATED SYSTEMS FOR LMFBR APPLICATION**

Richard R. Schemmel (center) (MS, physics, University of North Dakota, 1968) has been involved in research on dielectrics at Hanford Engineering Development Laboratory (HEDL) since 1969. He is currently working on a program concerned with the electrical properties of insulators used in reactor instrumentation. Lee D. Philipp (left) (PhD, electrical engineering, University of New Mexico, 1971) has six years experience in reactor instrumentation at Hanford where he has technical leadership responsibility for programs involving neutron flux instrumentation and insulator research and development. James L. Stringer (right) (MS, electrical engineering, University of Washington, 1966) has been working in reactor instrumentation development at Hanford for the past 15 years and has been involved with reactor cable applications since 1967. All three co-authors work in the Reactor Instrument Development group of Westinghouse Hanford Company at HEDL.

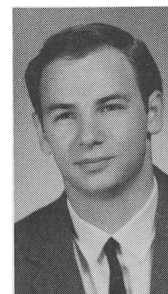
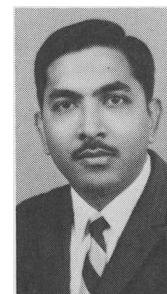
*R. R. Schemmel  
L. D. Philipp  
J. L. Stringer*



#### **EBRFLOW—A COMPUTER PROGRAM FOR PREDICTING THE COOLANT FLOW DISTRIBUTION IN THE EXPERIMENTAL BREEDER REACTOR-II**

A. Gopalakrishnan (left) (PhD, nuclear engineering, University of California, Berkeley) has been with the EBR-II Project at Argonne National Laboratory since 1969. Prior to joining Argonne he had been the manager of the Reactor Heat Transients Project at the University of California, Berkeley, and a senior research engineer at the Consolidated Engineering Technology Corporation in Mountainview, California. He is currently working in areas of thermal-hydraulic analysis and experimentation related to LMFBR operation and safety. Jerry L. Gillette (MS, nuclear engineering, University of Wisconsin, 1969) is an assistant nuclear engineer in the EBR-II Project at Argonne National Laboratory. His current interests include analytical and experimental methods of characterizing the irradiation environment in EBR-II.

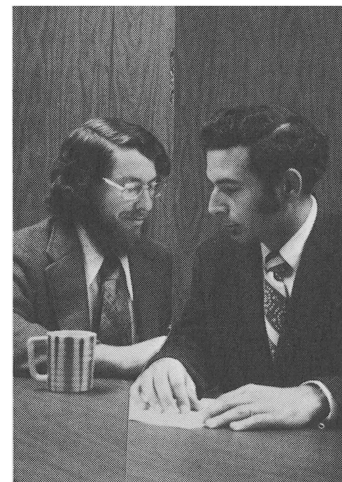
*A. Gopalakrishnan  
J. L. Gillette*



**NEUTRON SHIELDING PROBLEMS IN THE SHIPPING OF HIGH BURNUP THERMAL REACTOR FUEL**

H. S. Bailey (top left) (BA, physics, University of California, Berkeley, 1964; MS, nuclear engineering, Stanford, 1969) is manager of the Nuclear Design and Testing Unit of General Electric's Breeder Reactor Department. Since 1964, he has been involved in the design and analysis of both thermal and fast reactors at GE and has studied the criticality and radiation problems associated with the out-of-reactor portions of fast reactor fuel cycles. Bailey is responsible for the nuclear design of the LMFBR Demonstration Plant for GE. R. N. Evatt (bottom right) (MS, nuclear engineering, Purdue University, 1968) is a product planner specializing in fuel and reprocessing at the GE Nuclear Energy Division. In 1968 he started in the GE Breeder Reactor Department and worked extensively in fast reactor fuel management and core design. Geza L. Gyorey (bottom left) (PhD, nuclear engineering, University of Michigan, 1960) is manager of nuclear fuel business planning at the GE Nuclear Energy Division. Previously he held positions as manager of nuclear design of the GE Fast Breeder Reactor Department and as a faculty member at the University of Michigan. C. P. Ruiz (top right) (PhD, University of California, Berkeley, 1961) is a member of the staff of chemistry and chemical engineering at GE's Vallecitos Nuclear Center. He has been involved with developing techniques for the measurement of nuclear fuel burnup by the  $^{148}\text{Nd}$  method and heavy-element isotopic composition. His current interests involve nuclear fuel reprocessing and nondestructive fuel assay.

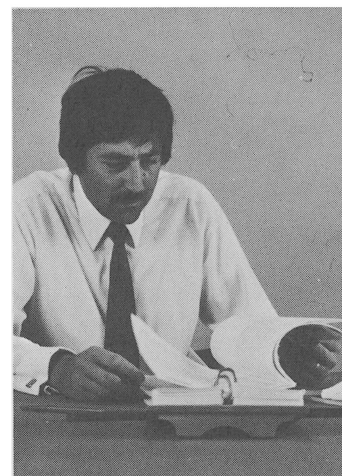
*H. S. Bailey  
R. N. Evatt  
G. L. Gyorey  
C. P. Ruiz*



**THERMAL CONDUCTIVITY OF TWO-PHASE SOLID BODIES**

J. P. Stora (Lic. sciences, University of Grenoble, France, 1959) presently is head of the irradiation group in the Department of Metallurgy at the Nuclear Study Center of Grenoble. His primary research interests are in the thermal conductivity of uranium dioxide. His present activities include the thermophysical properties of nuclear fuels.

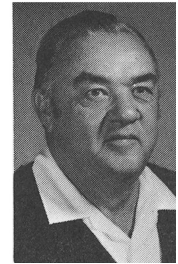
*J. P. Stora*



## FAST-NEUTRON DAMAGE TO POLYCRYSTALLINE ALUMINA AT TEMPERATURES FROM 60 TO 1230°C

Gerald W. Keilholtz (top) (PhD, Oregon State University, 1942), a safety and radiation control officer with the Nuclear Safety Information Center, has had interests in radiation damage to high temperature materials, in-pile loops and experiments, LMFBR neutron absorber materials, the space nuclear power program, and the nuclear safety program. As coordinator for the Environmental Reports Project, he has worked on storage and retrieval of technical information in computer systems. Robert E. Moore (center) (PhD, University of Chicago, 1950) has researched such areas as phase equilibria, preparation of ultra-pure materials, and radiation damage to high temperature materials. He is presently working on radiological safety of peaceful uses of nuclear explosives. H. E. Robertson (bottom), previously involved with assembly, operation, and postirradiation examination of in-pile experiments, is presently researching chemical absorption of tritium in graphite.

*G. W. Keilholtz*  
*R. E. Moore*  
*H. E. Robertson*

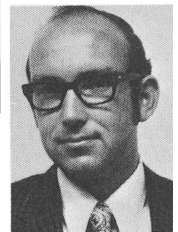
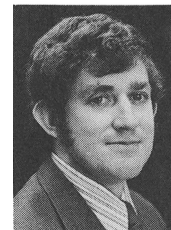
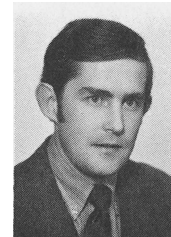


## RADIOISOTOPES

### CYCLIC ACTIVATION WITH A CALIFORNIUM-252 SOURCE

Stephen J. Gage (top) (PhD, nuclear engineering, Purdue University) is serving as a White House Fellow assigned as a technical assistant to the President's Science Advisor. He is presently on leave from the office of Director of the University of Texas Nuclear Reactor Laboratory. Gardner D. Atkinson, Jr. (center) (PhD, University of Texas, Austin) is assistant professor of mechanical engineering and the supervisor of the Nuclear Reactor Laboratory at the University of Texas, Austin. His interests include nuclear materials safeguards, nondestructive assay, automated spectral analysis, and applications of  $^{252}\text{Cf}$ . Gary Don Bouchey (bottom) (PhD, University of Texas, Austin) is nuclear reactor supervisor and researcher at the University of Texas Nuclear Reactor Laboratory. His research interests include operations research,  $^{252}\text{Cf}$  applications, neutron radiography, and neutron activation analysis. Bouchey is currently with the USAEC Division of Reactor Development and Technology, Washington, D.C. working in the area of LMFBR development.

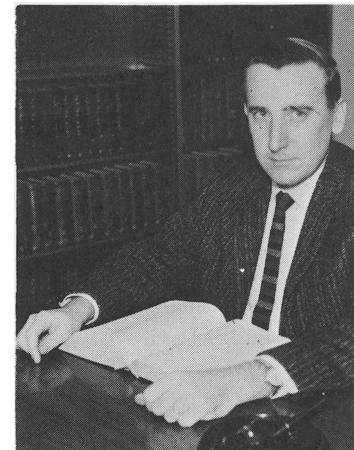
*S. J. Gage*  
*G. D. Atkinson, Jr.*  
*G. D. Bouchey*



### DEMONSTRATION OF COBALT-60 HEAT SOURCE CAPSULE PERFORMANCE

Carl L. Angerman (BS, chemistry, Bowling Green State University), a research scientist in the Nuclear Materials Division of the Savannah River Laboratory, has worked on a variety of problems in the field of nuclear metallurgy since 1952. His research interests include physical metallurgy, electron microscopy and diffraction, solid-state diffusion, and irradiation effects.

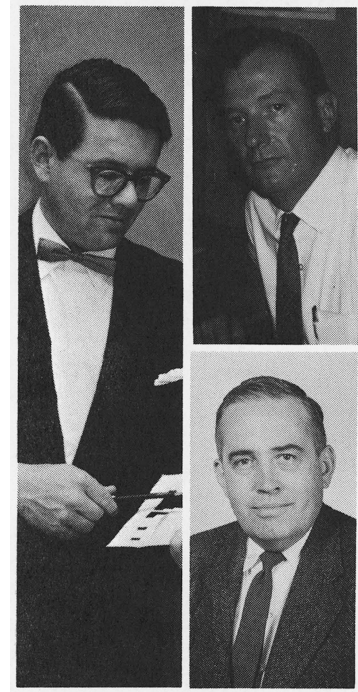
*C. L. Angerman*



### RADIOACTIVITY MONITOR FOR POWER PLANT ENVIRONMENTAL WATER

Gordon Riel (left) (BChE, University of Florida, 1956; PhD, nuclear engineering, University of Maryland, 1967) has been associated with the U.S. Ordnance Laboratory since 1956. He has numerous publications on underwater radiation detection. W. M. Hawkins, Jr. (not shown) (AB, physics, Harvard, 1931; MS, engineering, Harvard, 1933) is vice-president of Nutech, Inc., and has been with Southern Nuclear Engineering, Inc., since 1967. G. H. Liebler (top right) is director of Plant Health Physics, Indian Point Nuclear Station of Consolidated Edison Company of New York, Inc. D. Duffey (bottom) (BS, Purdue University, 1931; MS, University of Iowa, 1940; PhD, nuclear engineering, University of Maryland, 1956) is a professor of nuclear engineering at the University of Maryland. His technical interests are neutron uses and nuclear reactor design, construction, and operation.

*G. Riel*  
*W. M. Hawkins, Jr.*  
*G. H. Liebler*  
*D. Duffey*



### THE HALF-LIFE OF DYSPROSIUM-165

Albert Haccoun (top) (MSc, University of Paris, 1969) is a research physicist at the Negev Institute for Arid Zone Research, Beer Sheva, where he has been working since 1969. His current professional activity includes work on chloride well logging and on thermal flux measurement in water. Kenneth Preiss (center) (BSc, civil engineering, University of the Witwatersrand, Johannesburg, 1957; PhD, nuclear engineering, Imperial College, London, 1964) held a joint appointment as assistant professor of civil and nuclear engineering at the University of Illinois, Urbana, from 1964 to 1966. Presently at the Negev Institute for Arid Zone Research, he has published a number of papers on applications of nuclear radiation in civil engineering and earth sciences. Gad Shani (bottom) (PhD, nuclear science, Cornell University, 1970), a faculty member in the Department of Nuclear Science, University of the Negev, Israel, is presently doing research on the interaction of radiation with matter-applications and shielding problems. His previous activity centered on neutron waves in reflected reactors (PhD thesis) and neutron pulse techniques.

*A. Haccoun*  
*K. Preiss*  
*G. Shani*

