

# CONTENTS

N. R. CHELLEW AND R. K. STEUNENBERG. Fission Gas Release and Swelling During Heating of Irradiated EBR-II Type Fuel.....	1
HECTOR M. ANTÚNEZ. Determination of Fission Product Background in the Gamma Coincidence Technique for U <sup>238</sup> Activation Measurements.....	8
J. J. KEPES, L. A. MIKOLEIT, AND R. G. SERENKA. Resonance and Total U <sup>238</sup> Activation in Thin Natural Uranium—Niobium Fuel Plates.....	11
WILLIAM R. FAUST AND ARLO D. ANDERSON. Penetration and Diffusion of a Beam of Radiation....	17
A. FODERARO AND H. L. GARABEDIAN. Two Group Reactor Kinetics.....	22
C. E. DICKERMAN, G. H. GOLDEN, AND L. E. ROBINSON. In-Pile Photographic Studies of EBR-II Mark-I and Fermi Core—A Sample Meltdown.....	30
G. SAMUELS. Design and Analysis of the Experimental Gas-Cooled Reactor Fuel Assemblies.....	37
J. H. COOBS. Materials Development for Core I Fuel Assemblies for the Experimental Gas-Cooled Reactor.....	53
D. B. TRAUGER. Irradiation Testing of Fuel Materials for EGCR.....	69
J. G. MORGAN, M. F. OSBORNE, AND O. SISMAN. Irradiation Effects in the EGCR Fuel.....	83
LETTERS TO THE EDITORS	
R. L. MACKLIN, G. DESAUSURE, J. D. KINGTON, AND W. S. LYON. Manganese Bath Measurements of $\eta$ of Pu <sup>239</sup> .....	101
W. W. CLENDENIN. Effect of Zero Gradient Boundary Conditions on Cell Calculations in Cylindrical Geometry.....	103
Book Reviews.....	105

## Indexed in "Engineering Index" and Abstracted in "Nuclear Science Abstracts"

Published monthly at Mt. Royal and Guilford Aves., Baltimore, Md., for Academic Press Inc.  
111 Fifth Avenue, New York 3, N. Y.

During 1962, Volumes 12, 13, and 14 will be published. Price of each volume: \$21.00.

During 1963, Volumes 15, 16, and 17 will be published. Price of each volume: \$21.00.

Subscription orders should be sent to the publishers.

Notice of change of address must be received two months prior to the date of issue. Include both old and new addresses.

For Member Subscriptions: Notice should be sent to the Secretary of the American Nuclear Society,

John Crerar Library, 86 East Randolph Street, Chicago 1, Illinois.

For Non-member Subscriptions: Notice should be sent to the publishers.

Second-class mail postage paid at Baltimore, Md.

## Advertising Representatives

Jim Summers and Associates  
35 East Wacker Drive  
Chicago 1, Illinois

Chris Dunkle and Associates  
740 South Western Avenue, Los Angeles 5, California or  
420 Market Street, San Francisco 11, California