CONTENTS / AUGUST 2011—VOL. 175, NO. 2

TECHNICAL PAPERS

FISSION REACTORS

361 Multiobjective Design Optimization of the Upper Plenum of a PBMR-Type Gas-Cooled Nuclear Reactor / Sang-Moon Lee, Kwang-Yong Kim

371 Power Conversion System Evaluation for the Next Generation Nuclear Plant / Gregory A. Johnson

FUEL CYCLE AND MANAGEMENT

388 Using the Neutron Excess Concept to Determine Starting Fuel Requirements for Minimum Burnup Breed-and-Burn Reactors / Robert Petroski, Benoit Forget, Charles Forsberg

401 Partial Defect Tester: A Novel Approach to Detect Partial Defects in Pressurized Water Reactor Spent Fuel / Young S. Ham, Shivakumar Sitaraman

THERMAL HYDRAULICS

419 Experimental and Computational Assessment of Core Bypass Flow in Block-Type Very High Temperature Reactor / Su-Jong Yoon, Chang-Yong Jin, Min-Hwan Kim, Goon-Cherl Park

RADIATION TRANSPORT AND PROTECTION

435 Neutron Activation Study of the GRR-1 Research Reactor Core Supporting Plate / D. Kontogeorgakos, F. Tzika, I. E. Stamatelatos


REPROCESSING

450 An Integrated Mass Balance Model for Pyrochemical Processing / John Berger, Robert Benedict

MATERIALS FOR NUCLEAR SYSTEMS


468 Impact from the Adoption of Advanced Materials on a Sodium Fast Reactor Design / A. Moisseytsev, Y. Tang, S. Majumdar, C. Grandy, K. Natesan

(Continued)
RADIATION MEASUREMENTS AND GENERAL INSTRUMENTATION

480  Intelligent Recognition of Signature Patterns in NRF Spectra / Miltiadis Alamaniotis, Andreas Ikonomopoulos, Tatjana Jevremovic, Lefteri H. Tsoukalas

498  Prompt Neutron Decay for Delayed Critical Bare and Natural-Uranium-Reflected Metal Spheres of Plutonium and Highly Enriched Uranium / John T. Mihalczo