

### TECHNICAL PAPERS

#### REACTOR SAFETY

- 237 An Out-of-Box Approach to Integrate an Optimization Algorithm and MAAP5 for Parameter Identification / *Chih-Ming Tsai, Shih-Jen Wang, Show-Chyuan Chiang*

#### FUEL CYCLE AND MANAGEMENT

- 246 Irradiation Test of MOX Fuel Rods Fabricated by Attrition-Milling and Analysis of In-Pile Data with COSMOS Code / *Byung-Ho Lee, Yang-Hyun Koo, Han-Soo Kim, Jae-Yong Oh, Young-Woo Lee, Dong-Seong Sohn, Wolfgang Wiesenack*

#### PHOTON AND NEUTRON TRANSPORT AND SHIELDING

- 255 Radiation Shielding Options for a Nuclear Reactor Power System Landed on the Lunar Surface / *Aaron E. Craft, Jeffrey C. King*

#### RADIATION PROTECTION

- 273 Bonner Sphere System with Active Detector for Measurements in Pulsed Neutron Fields / *Eike Hohmann, Marlies Luszik-Bhadra, Helmut Schuhmacher, Burkhard Wiegel, Georg Fehrenbacher*

#### INSTRUMENTATION AND CONTROL SYSTEMS

- 278 A Decoupling Algorithm for Large Pressurized Heavy Water Reactors / *Nafisah Khan, Lixuan Lu*

#### REPROCESSING

- 287 Immobilization of Radioactive Salt Waste into Silica-Based Waste Form via Chemical Conversion / *Hwan-Seo Park, In-Tae Kim, Hwan-Young Kim, Byung Gil Ahn, Eung Ho Kim, Han Soo Lee*

#### MATERIALS FOR NUCLEAR SYSTEMS

- 295 Analysis of Displacement Damage Dose and Low Annealing Temperatures on the I-V Characteristics of SiC Schottky Diodes Using ANOVA Method / *Behrooz Khorsandi, Jonathan Kulisek, Thomas E. Blue, Don Miller, Jon Baeslack, Steve Stone*

#### RADIATION BIOLOGY AND MEDICINE

- 302 Compact D-D Neutron Source-Driven Subcritical Multiplier and Beam-Shaping Assembly for Boron Neutron Capture Therapy / *Francesco Ganda, Jasmina Vujic, Ehud Greenspan, Ka-Ngo Leung*

# CONTENTS / DECEMBER 2010—VOL. 172, NO. 3

(Continued)

## APPLICATIONS IN NONNUCLEAR FIELDS

- 325 The Detection of Explosive Materials: Review of Considerations and Methods /  
*Adrienne L. Lehnert, Kimberlee J. Kearfott*

## DEPARTMENTS

- 335 Technical Reviewers  
339 Volume 172 Indexes  
v Volume 172 Contents