

Volume 88, Issue 11
December 2025



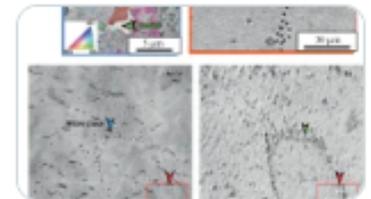
29 articles in this issue

Influence of the Size of Gamma-Prime Precipitates in High Temperature Ni-Based Superalloy Produced by PM HIP Technology on Their Composition and Partition of Alloying Elements between the Precipitates and the Gamma Matrix

Andrey V. Shulga

PERSPECTIVE STRUCTURAL MATERIALS | 21 December 2025 |

Pages: 2123 – 2136

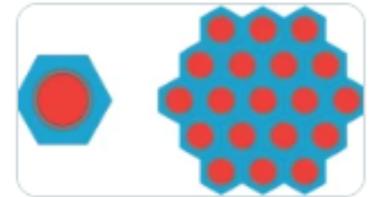


Justification of the Transition to Erbium Fuel in VVER-1000 Type Reactors Based on a Comparative Analysis of Reactivity Coefficients for Gadolinium and Erbium Burnable Absorbers

A. R. Muzafarov & V. I. Savander

THEORETICAL AND EXPERIMENTAL PHYSICS OF NUCLEAR REACTORS |

04 March 2026 | Pages: 2137 – 2143

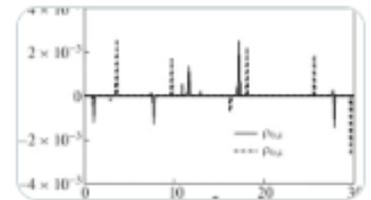


Diagnostics of VVER-1000 Core States by Reactivity Perturbations

V. Ya. Spitzer & V. V. Krivin

THEORETICAL AND EXPERIMENTAL PHYSICS OF NUCLEAR REACTORS |

04 March 2026 | Pages: 2144 – 2149



Peculiarities of Anisotropic Ultrasonic Radiation Passage in Deep-Water Sea Areas

A. P. Elokhin, S. E. Ulin ... N. M. Sveshnikov

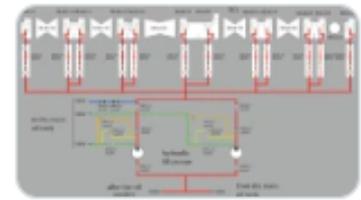
SAFETY OF NUCLEAR REACTORS | 04 March 2026 | Pages: 2150 – 2162



Modernization of the Rotor Hydraulic Lift Pump of the K-1200-6.8/50 Steam Turbine Unit

V. P. Povarov, D. E. Usachev ... A. A. Lotarev

SAFETY OF NUCLEAR REACTORS | 04 March 2026 | Pages: 2163 – 2166



Analysis of Calibration Error of NPP Shutoff Valve Electric Drive

A. A. Lapkis, L. V. Tsykhler ... V. P. Egorova

SAFETY OF NUCLEAR REACTORS | 04 March 2026 | Pages: 2167 – 2175



Gradient Method of Structural Heterogeneity Identification in Electrical Inspection of Equipment, Products, and Materials

V. I. Surin, M. B. Ivanyi ... A. E. Gook

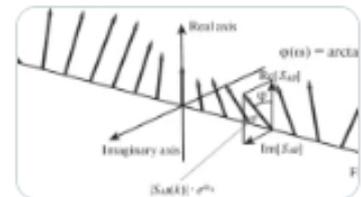
SAFETY OF NUCLEAR REACTORS | 04 March 2026 | Pages: 2176 – 2180



Neutron Noise Methods for Monitoring VVER Cores

G. V. Arkadov & M. T. Slepov

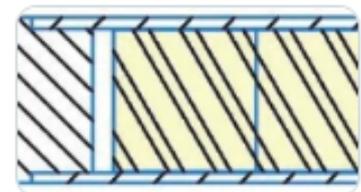
SAFETY OF NUCLEAR REACTORS | 04 March 2026 | Pages: 2181 – 2191



Thermal and Corrosion Tests of Dysprosium Hafnate up to 1300°C

V. D. Risovaniy, A. A. Mokrushin ... M. S. Staltsov

SAFETY OF NUCLEAR REACTORS | 21 December 2025 | Pages: 2192 – 2200



Nonlinear Finite-Difference Scheme with a Limiter for Numerical Modeling of Radiation Transport Processes

V. V. Zavyialov

MATH MODELING IN NUCLEAR TECHNOLOGIES | 04 March 2026 | Pages: 2201 – 2207

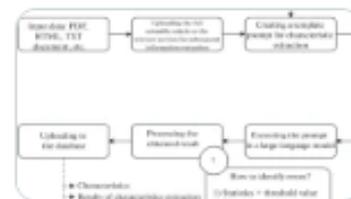


Methodology for Forming a Database of Characteristics of a Complex Technological Object Using Large Language Models

A. R. Matveeva & E. V. Antonov

MATH MODELING IN NUCLEAR TECHNOLOGIES | 04 March 2026 |

Pages: 2208 – 2212



Monte Carlo Simulation of Defect Formation in the Crystalline Structure of InAs Semiconductor on a Sapphire Substrate under Neutron Flux

V. R. Yamurzin & M. V. Bulavin

MATH MODELING IN NUCLEAR TECHNOLOGIES | 04 March 2026 |

Pages: 2213 – 2219

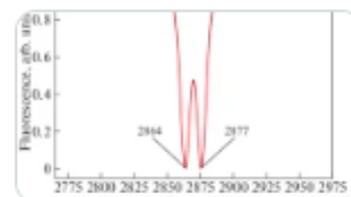


Investigation of the Energy Levels of the Kramers Degenerate ¹⁴NV-¹³C System in a Magnetic and Electric Field

A. T. Salkazanov, S. S. Vergeles ... A. P. Nizovtsev

MATH MODELING IN NUCLEAR TECHNOLOGIES | 04 March 2026 |

Pages: 2220 – 2224

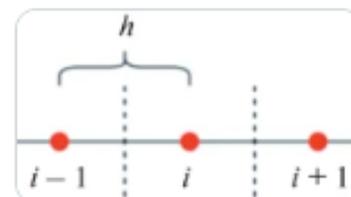


On a Method of Constructing an Irregular Grid for the One-Dimensional Convection-Diffusion Equation

S. A. Ladygin, R. N. Karachurin ... P. N. Ryabov

MATH MODELING IN NUCLEAR TECHNOLOGIES | 04 March 2026 |

Pages: 2225 – 2235

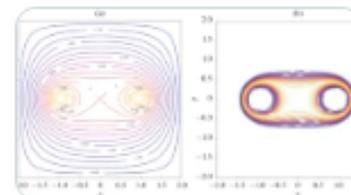


Mathematical Model of Plasma Equilibrium in the Multi-Connected Region of a Magnetic Trap

K. V. Brushlinskii, M. T. Istomina ... E. V. Stepin

MATH MODELING IN NUCLEAR TECHNOLOGIES | 04 March 2026 |

Pages: 2236 – 2246

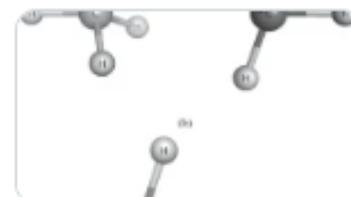


Description of Intermolecular Interactions in (CH₄)₂, CH₄Ne, and Ne₂ Dimers

B. V. Rutskey

MATH MODELING IN NUCLEAR TECHNOLOGIES | 04 March 2026 |

Pages: 2247 – 2254



Nonlinear Schrödinger Equation of General Form: Multifunctional Model, Reductions, and Exact Solutions

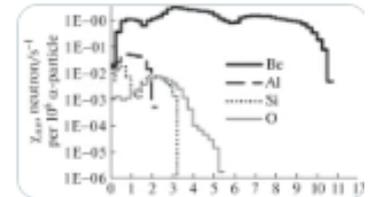
A. D. Polyanin & N. A. Kudryashov

MATH MODELING IN NUCLEAR TECHNOLOGIES | 04 March 2026 |
Pages: 2255 – 2261

Numerical Neutron Emission Spectrometry and Radiation of VVER-1200 Reactor Fuel

S. D. Polozkov, G. N. Vlaskin & S. V. Bedenko

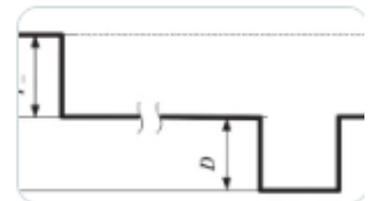
MATH MODELING IN NUCLEAR TECHNOLOGIES | 04 March 2026 |
Pages: 2262 – 2269



Equipment for Measuring the Kick Strength of the Extracted Bunch into the Aperture of the Septum Magnet SM24 of the U-70 Accelerator

E. A. Syshchikov, I. V. Ivanova & V. I. Terekhov

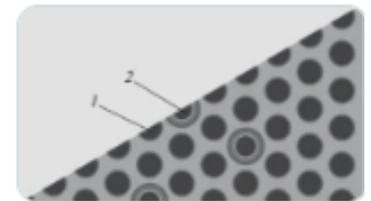
ENGINEERING DESIGN OF NUCLEAR PHYSICAL EQUIPMENT |
04 March 2026 | Pages: 2270 – 2273



Computational Modeling of the Neutronic Characteristics of the Core of a Water-Cooled Reactor with a Variable Neutron Spectrum

I. Sh. Kuskeev, V. V. Semishin ... Ya. D. Stolotnyuk

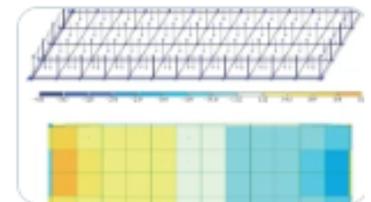
ENGINEERING DESIGN OF NUCLEAR PHYSICAL EQUIPMENT |
04 March 2026 | Pages: 2274 – 2280



Development and Design of NPP Fan Cooling Tower

S. S. Sinyatnikova, M. M. Baklanov ... Yu. V. Zayarov

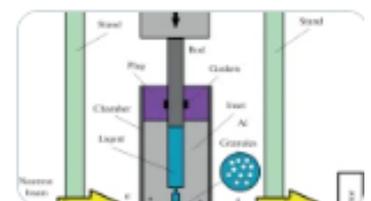
ENGINEERING DESIGN OF NUCLEAR PHYSICAL EQUIPMENT |
04 March 2026 | Pages: 2281 – 2287



Application of Small-Angle Neutron Scattering to Study the Filling of Nanoporous Material with a Nonwetting Liquid

A. A. Belogorlov, Yu. E. Gorshkova ... A. N. Tyulyusov

INTERACTION OF PLASMA, PARTICLE BEAMS, AND RADIATION WITH
MATTER
04 March 2026 | Pages: 2288 – 2293



Theory of Multiple Small-Angle Neutron Scattering with Account for Pseudomagnetic Interaction

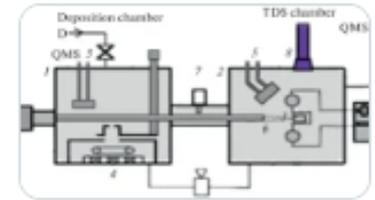
F. S. Dzheparov & D. V. Lvov

INTERACTION OF PLASMA, PARTICLE BEAMS, AND RADIATION WITH MATTER | 04 March 2026 | Pages: 2294 – 2299

Effect of Ultraviolet Radiation on Deuterium Desorption from Codeposited Lithium Layers

A. K. Khomyakov, S. A. Krat... A. A. Pisarev

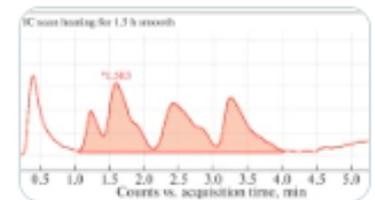
INTERACTION OF PLASMA, PARTICLE BEAMS, AND RADIATION WITH MATTER | 04 March 2026 | Pages: 2300 – 2306



Study of the Effects of Physicochemical Factors during Corrective Treatment of Reactor Bleed-off Water at Nuclear Power Plants to Ensure That Conditioned Radioactive Waste Meets Regulatory Requirements

V. P. Povarov, S. V. Rosnovsky ... M. A. Potapov

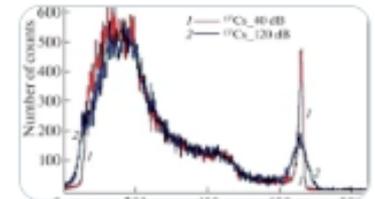
RADIATION SAFETY | 04 March 2026 | Pages: 2307 – 2316



Features and Methods of Protection against the Technogenic Acoustic Background Influencing the Character of γ Spectra Recorded by a Xenon γ Spectrometer

A. I. Majidov, S. E. Ulin ... A. E. Shustov

RADIATION SAFETY | 04 March 2026 | Pages: 2317 – 2320



Studies of Radiation and Protective Properties of Natural Minerals in Vietnam

O. L. Tashlykov, D. O. Pyltsova ... K. A. Mahmoud

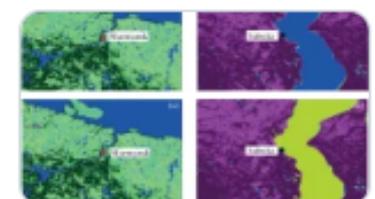
RADIATION SAFETY | 04 March 2026 | Pages: 2321 – 2327



Simulation Results of Dry Deposition of Radioactive Aerosols in the Arctic Regions of the Far North

D. A. Pripachkin & I. D. Sadofev

RADIATION SAFETY | 04 March 2026 | Pages: 2328 – 2332



Radiation Situation and Radiation Doses in the Russian Federation

V. V. Kosterev, A. G. Tsovyanov ... V. E. Zhuravleva

OriginalPaper | 04 March 2026 | Pages: 2333 - 2340