

Fusion technology

CONTENTS / MARCH 2001—VOL. 39, NO. 2

TECHNICAL PAPERS

- 119** Helium Transport in Advanced Tokamak Scenarios with Internal Transport Barrier / *Gerald Kamelander, Xavier Litaudon, Didier Moreau, Irina Voitsekhovitch*
- 127** Magnetohydrodynamic Heat Transfer Research Related to the Design of Fusion Blankets / *Leopold Barleon, Ulrich Burr, Klaus Jürgen Mack, Robert Stieglitz*
- 157** Experimental Measurement of the Interface Heat Conductance Between Nonconforming Beryllium and Type 316 Stainless Steel Surfaces Subjected to Nonuniform Thermal Deformations/ *Robert Dean Abelson, Mohamed A. Abdou*
- 189** Rate of Isotope Exchange Reaction Between Tritiated Water in a Gas Phase and Water on the Surface of Piping Materials / *Nobuyuki Nakashio, Junya Yamaguchi, Ryusuke Kobayashi, Masabumi Nishikawa*
- 198** A 14-MeV Intense Neutron Source Based on Muon-Catalyzed Fusion—I: An Advanced Design / *Viatcheslav V. Anisimov, Vladimir A. Arkhangel'sky, Nikolay S. Ganchuk, Arkady A. Yukhimchuk, Emanuela Cavalleri, Fedor I. Karmanov, Alexander Yu. Konobeyev, Victor I. Slobodtchouk, Lioudmila N. Latysheva, Igor A. Pshenichnov, Leonid I. Ponomarev, Marcello Vecchi*
- 209** A 14-MeV Intense Neutron Source Based on Muon-Catalyzed Fusion—II: Pion Production Target / *Viatcheslav V. Anisimov, Emanuela Cavalleri, Fedor I. Karmanov, Victor I. Slobodtchouk, Lioudmila N. Latysheva, Igor A. Pshenichnov, Marcello Vecchi*
- 219** A 14-MeV Intense Neutron Source Based on Muon-Catalyzed Fusion—III: Thermohydraulic Regime of the Synthesizer / *Viatcheslav V. Anisimov, Emanuela Cavalleri, Fedor I. Karmanov, Victor I. Slobodtchouk, Lioudmila N. Latysheva, Igor A. Pshenichnov, Marcello Vecchi*
- 228** An Assessment of the Economics of Future Electric Power Generation Options and the Implications for Fusion / *Jerry G. Delene, John Sheffield, Kent A. Williams, R. Lowell Reid, Stan Hadley*
- 249** Proton-Electron Reactions as Precursors of Anomalous Nuclear Events / *Lino Daddi*
- 253** Producing a Radioactive Source in a Deuterated Palladium Electrode Under Direct-Current Glow Discharge/ *Hiroshi Yamada, Kazuyoshi Uchiyama, Nobuhiko Kawata, Yoshiyuki Kurisawa, Mitsuru Nakamura*
- 260** Deuteron Interaction Within a Microcrack in a Lattice at Room Temperature / *Fulvio Frisone*
- 266** Three-Dimensional Analysis of the Lattice Confinement Effect on Ion Dynamics in Condensed Matter and Lattice Effect on the D-D Nuclear Reaction Channel / *Vittorio Violante, Amalia Torre, Giovanna Selvaggi, George H. Miley*

(Continued)

CONTENTS / MARCH 2001—VOL. 39, NO. 2

(Continued)

DEPARTMENTS

282 Meeting Report

Summary of the 10th International Toki Conference on Plasma Physics
and Nuclear Fusion Research: Physics and Technology for Steady-State
Plasmas, Toki, Japan, January 18–22, 2000 / *Osamu Motojima,*
Nobuaki Noda

286 Book Reviews

Congress and the Fusion Energy Sciences Program: A Historical Analysis /
reviewed by *Stephen O. Dean*

Excess Heat: Why Cold Fusion Research Prevailed / reviewed by
Scott Chubb