

Transactions of Fusion Science and Technology

CONTENTS / JULY 2011—VOL. 60, NO. 1T

Proceedings of the FIRST INTERNATIONAL YOUTH CONFERENCE (IYC) ON FUSION ENERGY

October 9–10, 2010

Daejeon, Korea

- iii Preface: First International Youth Conference (IYC) on Fusion Energy / *Richard Kamendje*

- 1 Study on Conceptual Design and Technical Safety Issues for Korean Demonstration Fusion Reactors / *Myoung-Suk Kang, Gyunyoung Heo, Young-Seok Lee, Hyuck Jong Kim*

- 9 Research of Reactor Radiation Influence upon Processes of Hydrogen Isotopes Interaction with Materials of the Fusion Facility / *Aliya O. Sadvakassova, Irina L. Tazhibayeva, Ergasy A. Kenzhin, Zhanna A. Zaurbekova, Timur V. Kulsartov, Yuri N. Gordiyenko, Yevgeni V. Chikhray*

- 16 Study of the ${}^9\text{Be}(\alpha, n\gamma){}^{12}\text{C}$ Reaction for the High Temperature Plasma Diagnostics / *D. B. Gin, A. A. Pasternak, V. G. Kiptily, I. N. Chugunov, A. E. Shevelev*

- 22 Annealing Effects on the Microstructure of Ferritic-Martensitic ODS-Eurofer Steel / *R. A. Renzetti, H. R. Z. Sandim, A. F. Padilha, D. Raabe, R. Lindau, A. Möslang*

- 27 Spectroscopy of Plasma Surface Interaction in Experiments Simulating ITER Transient Events / *M. S. Ladygina et al.*

- 34 Materials Erosion and Eroded Material Deposition Under Intense Plasma Action / *N. S. Klimov, V. A. Kurnaev, A. M. Zhitlukhin, D. V. Kovalenko, I. M. Poznyak, A. A. Moskacheva, D. B. Abramenko*

- 40 Fullwave Simulations of Lower Hybrid Waves Coupled to 3D Fokker-Planck Solver: Comparison with Alcator C-Mod Experiment / *O. Meneghini, S. Shiraiwa, I. Faust, R. R. Parker, A. Schmidt, G. Wallace*

- 48 Benchmark of Fluid and Kinetic Simulations of Type III Elming H-Mode on TCV / *Barbora Gulejová, Richard Pitts, David Tskhakaya, David Coster*

- 56 Electrorheological Kelvin-Helmholtz Instability at the Interface Between a Nano Structured Porous Layer and Thin Shell with Poorly Conducting Couple Stress Fluid / *G. Chandrashekhara, N. Rudraiah*

(Continued)

CONTENTS / JULY 2011—VOL. 60, NO. 1T

(Continued)

- 64 The Implementation of Web Based Plasma Properties Reference Data Collection and Evaluation System / *Jun-Hyoung Park, Sung-Ha Hwang, Jung-Sik Yoon*
- 69 Comparative Study on the Safety Characteristics of Fission and Fusion Power Plants in Korea / *Jeongtae Cho, Gyunyoung Heo, Young-Seok Lee, Hyuk-Jong Kim*
- 75 Statistical Characteristics of ITG-Driven Turbulence Dominated by Zonal Flows / *Taro Matsumoto, Jiquan Li, Yasuaki Kishimoto*
- 80 Re-Evaluation of the Neutronics Experiments for the ITER Shielding Blanket Using ENDF/B-VII, JEFF-3.1, and JENDL-3.3 / *Ji Sung Park, Chang-Ho Shin, Jong Kyung Kim, Young-Seok Lee, Hyuck Jong Kim*
- 84 Analysis of the Complex Interferometry Diagnostics Applicability to Deuterium Clusters Spatial Density Distribution Measurement / *Michaela Martinkova, Milan Kalal, Yong Yoo Rhee*
- 90 Measurement of Hard X-Rays on KSTAR / *J. W. Yoo, Y. S. Lee, A. C. England, Z. Y. Chen, W. C. Kim, Y. K. Oh, M. Kwon*
- 94 Ion Cyclotron Wall Conditioning (ICWC) on KSTAR / *Dong Su Lee et al.*
- 98 Water Impurity Removal by Different Wall Conditioning Methods / *Sungwoo Kim, Suk-Ho Hong, Kwang Pyo Kim, Dong Su Lee, Woong Chae Kim, Kap-Rae Park*
- 102 The Design of Technology Information Search System for National Fusion Reactor Based on RDF/XML / *Sung-Ha Hwang, Jun-Hyoung Park, Jung-Sik Yoon*
- 107 Study on Discharge Characteristics of a Cylindrical Inertial Electrostatic Confinement (IEC) Device for High-Yield Fusion Sources / *Bong-Ki Jung, Soon-Wook Jung, Jae-Ryung Lee, Kyoung-Jae Chung, Y. S. Hwang*
- 112 Improvement of the Beam Quality of a Wave-Front Dividing Beam Combined Laser System Using a Serrated Aperture / *Seongwoo Cha, Sangwoo Park, Hong Jin Kong*
- 117 Volume 60, No. 1T indexes