

Fusion technology™

CONTENTS / DECEMBER 1990—VOL. 18, NO. 4

ALPHA PARTICLES IN FUSION RESEARCH

- 535** Preliminary Analysis of Alpha-Particle Effects in the Fusion Ignition Experiment IGNITEX / *Rodolfo Carrera, Elena Montalvo, James W. Van Dam, Guo-Yong Fu, Lee M. Hively, George H. Miley, Marshall N. Rosenbluth, Steven Tamor*
- 556** Investigations of Fast-Particle Behavior in Joint European Torus Plasmas Using Nuclear Techniques / *Guy J. Sadler, Sean W. Conroy, Owen N. Jarvis, Pieter van Belle, J. Martin Adams, Malcolm A. Hone*
- 573** Alpha-Particle Experiments on the Tokamak Fusion Test Reactor and the Compact Ignition Tokamak / *Stewart J. Zweben, J. D. Strachan, Kenneth M. Young*
- 578** Initial Results of Helium Ash Experiment in the JT-60 Lower Divertor / *Hiroo Nakamura, Kenji Tobita, Toshio Hirayama, Yoshihiko Koide, Takashi Arai, Masaaki Kuriyama, Hirotaka Kubo, Yoshinori Kusama, Tatsuo Sugie, Masayoshi Sugihara, Tomonori Takizuka, Keiji Tani, Shin Yamamoto*
- 583** Capabilities of Gamma Spectroscopy for Fast Alpha-Particle Diagnostics / *Vasilij G. Kiptilyj*
- 591** Effect of Energetic Particle Absorption on Fast-Wave Current Drive / *S. C. Chiu, V. S. Chan*
- 597** Alpha-Particle-Induced Toroidal Flows in Tokamak Reactor Plasma / *Ya. I. Kolesnichenko, Yu. V. Yakovenko*
- 606** Active Control of Burn Conditions for the International Thermonuclear Experimental Reactor / *Scott W. Haney, L. John Perkins, John Mandrekas, Weston M. Stacey, Jr.*
- 618** Control of Alpha-Particle Transport by Ion Cyclotron Resonance Heating / *C. S. Chang, Kaya Imre, Harold Weitzner, P. Colestock*
- 625** Passive Burn Control in a Tokamak Plasma Using Toroidal Field Ripple / *Keiji Tani, Masafumi Azumi, Tomonori Takizuka*
- 633** Epithermal and Thermal Alpha-Particle Transport and Control / *George H. Miley, S. C. Hu, V. Varadarajan*

(Continued)

ON THIS COVER

This month's cover is based on the proton orbits shown in Fig. 1 of the paper by G. Sadler et al.

CONTENTS / DECEMBER 1990—VOL. 18, NO. 4

(Continued)

TECHNICAL NOTES ON COLD FUSION

- 641** A Search for Neutron Emission from Cold Nuclear Fusion in a Titanium-Deuterium System / *Tatsuo Izumida, Yoshihiro Ozawa, Kunio Ozawa, Shigeru Izumi, Shunsuke Uchida, Tomohiko Miyamoto, Hisao Yamashita, Hiroshi Miyadera*
- 647** Prediction of New Particle Emission on Cold Fusion / *T. Matsumoto*
- 652** Calorimetric Measurements of Excess Power Output During the Cathodic Charging of Deuterium into Palladium / *R. A. Oriani, John C. Nelson, Sung-Kyu Lee, J. H. Broadhurst*
- 659** Measurements of Helium in Electrolyzed Palladium / *John R. Morrey, Marc W. Caffee, Harry Farrar IV, Nathan J. Hoffman, G. Bryant Hudson, Russell H. Jones, Mark D. Kurz, John Lupton, Brian M. Oliver, Brian V. Ruiz, John F. Wacker, A. van Veen*
- 669** Statistical Analysis of Neutron Burst Size and Rate During Electrolysis of LiOD Solutions / *John N. Harb, William G. Pitt, H. Dennis Tolley*
- 678** The Possible Negative Influence of Dissolved O₂ in Cold Nuclear Fusion Experiments / *Pier Giorgio Sona, Marco Ferrari*
- 680** Neutron Burst from a High-Voltage Discharge Between Palladium Electrodes in D₂ Gas / *Yeong E. Kim*
- 683** Could Spectator Electrons Legalize Cold Fusion? / *Lali Chatterjee*
-

DEPARTMENTS

- 525** Authors
- 686** Meeting Report
Summary of the 17th Conference on Controlled Fusion and Plasma Heating, Amsterdam, The Netherlands, June 25–29, 1990 / *A. A. M. Oomens, A. G. A. Verhoeven*
- 691** Volume 18 Indexes
- v** Volume 18 Contents