

## AUTHORS — AUGUST 1993

### BLANKET ENGINEERING

#### LITHIUM/WATER INTERACTIONS: EXPERIMENTS AND ANALYSIS / *S. Lomperski, Michael L. Corradini*



A biography and photograph of **S. Lomperski** were not available. **Michael L. Corradini** (BS, mechanical engineering, Marquette University; MS and PhD, nuclear engineering, Massachusetts Institute of Technology) is a professor of nuclear engineering and engineering physics at the University of Wisconsin-Madison. Previously, at Sandia National Laboratories, he was principal investigator in the light water reactor explosion research program. He has been a consultant for 10 years to the U.S. Nuclear Regulatory Commission (NRC) Advisory Committee on Reactor Safeguards in severe accidents, containment systems, and thermal hydraulics. He was vice chairman of the 1985 NRC Steam Explosion Review Group. He has worked in areas related to vapor explosion phenomena, jet spray dynamics, and chemical reactions in multiphase systems.

### PLASMA ENGINEERING

#### EFFECTIVE ION TAIL FORMATION DURING STARTUP NEUTRAL BEAM HEATING IN D-<sup>3</sup>He PLASMAS / *Hideaki Matsuura, Yasuyuki Nakao, Yutaka Tanaka, Kazuhiko Kudo*



**Hideaki Matsuura** (right) (PhD, nuclear engineering, Kyushu University, Japan, 1993) is an assistant professor of nuclear engineering at Kyushu University. His main work areas include kinetic characteristics of burning reactor plasma and advanced fuel fusion studies. **Yasuyuki Nakao** (left) (Dr., nuclear engineering, Kyushu University, Japan, 1981) is an associate professor of nuclear engineering at Kyushu University. His current research interests include

nuclear processes in dense plasma systems, neutron and charged-particle transport problems, and the kinetics of thermonuclear burning. **Yutaka Tanaka** (right) (BS, nuclear engineering, Kyushu University, Japan, 1991) is a graduate student of nuclear engineering at Kyushu University. His current interests are advanced fuel fusion and plasma heating. **Kazuhiko Kudo** (left) (PhD, engineering, Kyushu University, Japan) is a professor at Kyushu University. His current interests are reactor control systems, gas-cooled reactors, and advanced fuel fusion reactors.



## ICF TARGETS

### EFFECT OF D-D REACTIONS ON THE VOLUME IGNITION OF LASER-DRIVEN D-<sup>3</sup>He FUSION PELLETS / *Rasol Khoda-Bakhsh, Heinrich Hora, George H. Miley*

**Rasol Khoda-Bakhsh** (top) (BS, physics, Teachers Training College, Iran, 1974; MSc, 1977, and PhD, 1981, University of Birmingham, United Kingdom) joined the academic staff of the University of Urmia in 1981 and has been Vice-Chancellor for Education Affairs since 1985. He was on sabbatical at the University of New South Wales from October 1990 to October 1991. His research interests are neutron scattering and laser/plasma interaction. **Heinrich Hora** (center) (Dipl. Phys., Martin Luther University, Germany, 1956; Dr. rer. nat., Friedrich Schiller University, Germany; DSc, University of New South Wales, Australia, 1981) was a professor and head of the Department of Theoretical Physics at the University of New South Wales from 1975 to 1991. He currently holds a position at CERN. His interests include laser/plasma interaction theory, photodetectors, semiconductor lasers, free electron lasers, and extreme states. **George H. Miley** (bottom) (PhD, University of Michigan, 1958) is a professor in the Department of Nuclear Engineering at the University of Illinois. In addition to research on fusion, he is well known for his research on energy conversion and nuclear-pumped lasers.



## EXPERIMENTAL DEVICES

### DERIVATION OF NUCLEAR PARAMETERS FOR DELAYED NEUTRON DETECTOR MEASUREMENTS FOR D-D AND D-T PLASMA OPERATION AT THE JOINT EUROPEAN TORUS / *Maurizio Angelone*

**Maurizio Angelone** (Dr., physics, University of Rome, Italy, 1982) worked for ENEA at the Casaccia Nuclear Centre, where he was involved in neutron dosimetry for fast reactors using the absolute radiometric technique and fast reactor shielding using conventional and Monte Carlo transport calculations. In 1989, he moved to the Frascati Fusion Centre, where he is involved in neutron spectra measurements and in the construction of a neutron generator.



**POLOIDAL FLUX REQUIREMENT: ANALYSIS AND APPLICATION TO THE IGNITOR CONFIGURATION** / *Marco Nassi*

**Marco Nassi** (Dr., nuclear engineering, Politecnico di Milano, Italy, 1985) is a research fellow, supported by ENEA, at the Massachusetts Institute of Technology. His current research interests are in the design of high-magnetic-field tokamaks and, in particular, such areas as plasma transport simulations, vertical stability analysis and feedback control system design, plasma current penetration, and volt-second consumption

**DEVELOPMENT OF SILICON CARBIDE COMPOSITES FOR FUSION** / *Lance L. Snead*

**Lance L. Snead** (BS, physics, 1985; BS, 1986; MS, 1988; and PhD, 1992, nuclear engineering, Rensselaer Polytechnic Institute) is a member of the Metals and Ceramics Division of Oak Ridge National Laboratory. His research interests are in the area of radiation damage to ceramics and carbon-based material as well as fusion reactor design.

**A MOVING BELT DIVERTOR CONCEPT** / *Lance L. Snead, Roger A. Vesey*

**Lance L. Snead** (top) [BS, physics, 1985; BS, 1986; MS, 1988; and PhD, 1992, nuclear engineering, Rensselaer Polytechnic Institute (RPI)] is a member of the Metals and Ceramics Division of Oak Ridge National Laboratory. His research interests are in the area of radiation damage to ceramics and carbon-based material as well as fusion reactor design. **Roger A. Vesey** (PhD, nuclear engineering, RPI, 1992) is currently a U.S. Department of Energy research fellow at Princeton Plasma Physics Laboratory. His research interests include edge plasma modeling, plasma-facing components, and finite element analysis.

**FUSION POWER ECONOMY OF SCALE** / *Thomas J. Dolan*

**Thomas J. Dolan** is in the Fusion Safety Program of EG&G Idaho at the Idaho National Engineering Laboratory. His research interests include fusion reactor studies, stellarators, and plasma diagnostics.



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## COLD FUSION

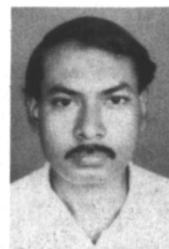
### COMMENTS ON THE MODEL FOR COHERENT DEUTERON-DEUTERON FUSION IN CRYSTALLINE Pd-D LATTICE / *S. N. Vaidya*

**S. N. Vaidya** (MSc, physics, 1960, and PhD, 1966, Indian Institute of Technology, India) has been a scientific officer at Bhabha Atomic Research Centre since 1972. His interests include cold fusion, high-pressure research, and the theory of melting.



### FUSION IN CONDENSED MATTER—A LIKELY SCENARIO / *D. Das, M. K. S. Ray*

**D. Das** (top) [MSc, chemistry, Calcutta University, India, 1973; Bhabha Atomic Research Centre Training School (BARCTS), India, 1974; PhD, physical chemistry, University of Bombay, India, 1985] specializes in materials sciences, high-temperature thermochemistry, and electron beam optics. He is especially interested in the development of the conceptual foundation of quantum phenomena. **M. K. S. Ray** (BE, chemical engineering, Jadavpur University, India, 1968; BARCTS, India, 1969) specializes in the conceptualization, design, and development of processes and systems. He led the team that designed India's first plant for vitrification of high-level radioactive wastes. His current interest is materials science relative to cold fusion phenomena.



### THE SURFDYN CONCEPT: AN ATTEMPT TO SOLVE (OR RENAME) THE PUZZLES OF COLD NUCLEAR FUSION / *Peter Glück*

**Peter Glück** (no photograph available) (BS, 1959, and PhD, 1983, chemical engineering, Polytechnical Institute of Jassy, Romania) is a senior researcher at the Institute of Isotopic and Molecular Technology. His interests include cold fusion, catalysis, electrochemistry, polymers, materials science, and the philosophy of science.