Rapid Communications
Sustained Detachment with the Self-Regulated Plasma Edge beneath the Last Closed Flux Surface in LHD
.................................................. MIYAZAWA Junichi, MASUZAKI Suguru, SAKAMOTO Ryuichi, PETERSON Byron J., SAKAKIBARA Satoru, OHYABU Nobuyoshi, KOMORI Akio, MOTOJIMA Osamu and LHD Experimental Group
Spontaneous Formation of Low-Aspect-Ratio Torus Equilibria by ECH under Steady Vertical Field
.................................................. YOSHINAGA Tomokazu, UCHIDA Masaki, TANAKA Hitoshi and MAEKAWA Takashi
First Results of Magnetized Plasma Flow Injection on the TPE-RX Reversed-Field Pinch
.................................................. ASAI Tomohiko, NAGATA Masayoshi, KOGUCHI Haruhisa, KIYAMA Satoru, HIRANO Yoichi, YAGI Yasuyuki and SAKAKITA Hajime

Commentary
Microwave Imaging Diagnostics ................................................................. NAGAYAMA Yoshio and MASE Atsushi
Column: Expecting a New Phase ................................................................. ITOH Kimitaka

Special Topic Article
Present and Future of Semiconductor Pulsed Power Generator
~Role of Power Semiconductor Devices in Plasma Research~
1. Introduction ............................................................................................... ISHII Shozo
2. Application of All Solid-State Pulsed Power Generators to Equipment Using Plasmas
.................................................. SAKUGAWA Takashi, NAMIHIRA Takao, KATSUKI Sunao, AKIYAMA Hidenori, OSADA Toshihiro and KOGANEZAWA Takehisa
3. Pulsed Power Generator with Inductive-Energy Storage Using Semiconductor Opening Switch
.................................................. NAMIHIRA Takao, SAKUGAWA Takashi, KATSUKI Sunao and AKIYAMA Hidenori
4. Fast High-Voltage Pulse Generator Utilizing Si-Thyristor
.................................................. IBUKA Shinnji
5. High-Repetition-Rate Marx Generator Using Thyristor Switches
.................................................. MAEYAMA Mitsukazu
6. High-Speed, Large-Current Power Semiconductors for Pulse Power Generation
.................................................. TAKA Ikonori
7. Future View of Semiconductor Pulsed Power Generator
.................................................. ISHII Shozo

Lecture Note
Superconductivity Engineering and Its Application for Fusion
2. Synergy Effects of Superconducting Technology Progress in Industrial Applications and Nuclear Fusion Development .......................................... HANAI Satoshi

Contributed Papers
Petawatt Laser Direct Heating of Uniformly Imploded CD Shell Target
.................................................. KITAGAWA Yoneyoshi, SENTOKU Yasuhiko, TANAKA Kazuo A., KODAMA Ryosuke, NISHIMURA Hiroaki, NAKAI Mitsu, NORIMATSU Takayoshi and SUNAHARA Atsushi
Development of Photocathode Electron Source with Compact X-Ray Source Generated by Line-Focused Laser Irradiation
.................................................. YAMAGUCHI Naohiro, TAKAHASHI Zen, NISHIMURA Yasuhiko, SAKATA Atsushi, WATANABE Katsumi, OKAMOTO Yuju, TAKEMURA Yuichiro, AZUMA Hirozumi and HARA Tamio

Cover
The ion density profile around the critical density used in 2-D PIC code by Y. Sentoku. Ion density profile is snowplowed by laser at 700 fs, which penetrates 10 micron into the overdense region. (p.384 ‘Petawatt Laser Direct Heating of Uniformly Imploded CD Shell Target’ Y. KITAGAWA et al.)