Prologue
An Address of a New Year 2010 ................................................................. OGAWA Yuichi 1

Commentary
Controlling of Disruption — Progress in Physics Understanding and Control Techniques ........................................... KAWANO Yasunori, SUGIHARA Masayoshi and TOBITA Kenji 3

Special Topic Article
Plasma Technology for Next Generation Crystalline Silicon Solar Cells
6. Plasma CVD Method for Industrialization of Thin Film Silicon Solar Cells ............................... TERAKAWA Akira 17
7. High-Efficiency Microcrystalline Si Thin-Film Solar Cells Using High-Rate Deposition
   Techniques by Plasma Enhanced Chemical Vapor Deposition .............................................. TOYAMA Toshihiko 21
8. Frontier of Development of Large-Area Plasma CVD Processing ............................................... SUGAI Hideo 28
9. Towards Revolutionary Amorphous Silicon Solar Cells
   without Light-Induced Degradation .................................................................. SHIRATANI Masaharu and KOGA Kazunori 33
10. Conclusion ................................................................................. MASUDA Atsushi 37

Research and Technology Note
Development and Industrial Applications of Atomospheric Multi-Gas Plasma Sources
.............................................................................................................. OKINO Akitoshi, SASAKI Ryota, NAGATA Yoichi, SHIGETA Kaori,
IWA Takahiro and MIYAHARA Hidetaka 40

PFR Abstracts ........................................................................................................ 43
Information ........................................................................................................... 44
Plasma & Fusion Calendar ..................................................................................... 50
Announcement ...................................................................................................... 52

Cover
The poloidal cross section of the Ring Trap 1 (RT-1) device. A high-temperature superconducting coil levitated in the vacuum chamber generates a magnetospheric configuration. A variety of interesting phenomena are observed in the magnetosphere. Electrons injected from the edge confinement region are transported to the strong magnetic field region against the density gradient and stably trapped. The confinement time exceeds 300 s. (Haruhiko SAITO et al., Plasma and Fusion Research Vol.4, 054 (2009) http://www.jspfor.jp/PFR/)

Published Monthly by
The Japan Society of Plasma Science and Nuclear Fusion Research
3-1-1, Uehiyama, Chikusa-ku, Nageya 464-0075, Japan
Tel 052-735-3185, Fax 052-735-3485, E-mail: plasma@jspfor.jp, URL: http://www.jspfor.jp/