

Special Issue : R&D Group and Global Expansion

Opening Remarks

- Our Efforts to Develop a New Business and a Global R&D in the Furukawa Electric Group *Kazuaki Nishikata* 1
 The Globalization of the Furukawa Electric Group *Mikimori Maekawa* 2

Overview of the Special Issue

- R&D Group and Global Expansion 3

Topics

- Telecommunication·Energy** Establish New Development Structure for Global Market:
 International Technology Development Center *Takumi Matsumoto, Hiroyuki Ishida* 4

Company Profile

- Telecommunication·Energy** Introduction of SuperPower Inc. and High Temperature Superconducting Wire
*Drew Hazelton, Yifei Zhang, Allan Knoll, Gene Carota, Aarthi Sundaram, Paul Brownsey,
 Hiroshi Kuraseko, Ryusuke Nakasaki, Masayasu Kasahara, Hirotsugu Nagata, Toru Fukushima* 8

Papers

- Advanced Technology** Gas Phase Precursor Chemistry in Carbon Nanotube Growth: a Reactive Molecular Dynamics and Quantum Chemistry Study
András Olasz, Péter Szelestey, Tamás Veszprémi, Gábor Varga, Tibor Höltzl 11
- Telecommunication·Energy** Ultra-large-area Low-loss Fibers and Advanced Amplifiers for Large Capacity Long Haul Optical Network
*Benyuan Zhu, Dave Peckham, Alan H. McCurdy, Robert Lingle Jr., Bera Pálsdóttir, Man F. Yan,
 Patrick W. Wisk, David J. DiGiovanni* ... 18
- Telecommunication·Energy** Distributed Sensing Over Meter Lengths Using Twisted Multicore Optical Fiber with Continuous Bragg Gratings
P. S. Westbrook, K.S. Feder, T. Kremp, W. Ko, H. Wu, E. Monberg, D. A. Simoff, K. Bradley, R. Ortiz 26

Regular Papers

- Telecommunication·Energy** A Narrow Linewidth Tunable Light Source with an Etched Core DR Laser
Kazuaki Kiyota, Go Kobayashi, Shunsuke Okuyama, Tatsuya Kimoto 33
- Telecommunication·Energy** Cladding Pumped Amplifier Using Seven-core EDF
*Koichi Maeda, Shigehiro Takasaka, Ryuichi Sugizaki, Yukihiro Tsuchida, Kengo Watanabe,
 Tsunetoshi Saito* 42
- Automotive Products·Electronics** The Development of a Cu-Co-Si Alloy with a High Strength and a High Electrical Conductivity
Shoichi Danjo, Takemi Isomatsu, Ryosuke Matsuo, Masaru Higuchi 48
- Automotive Products·Electronics** Lead-Acid Battery State Sensor
 ~Development of a Battery Type Classification Technology by Using an Equivalent Circuit Model and a Support Vector Machine~
Noriyasu Iwane, Taiji Mitsuyama, Yudai Tanimura 54
- Fusion of Core Technologies** The Application of the Electromagnetic Simulation Technology to the Products in the Automotive Fields
*Yujiro Nakayama, Satoru Torimitsu, Daisuke Inoue, Masayuki Nagata, Eisuke Otani,
 Shoichi Negami* 61
- Advanced Technology** Effect of the Surface State of Particle and the PolyolDecomposition on the Copper Nanoparticle Sintering Process
Norazfriza Nitta, Tomohiro Ishii, Yoshihiro Sato, Hidemichi Fujiwara 65

New Products

- Electronics·Automotive systems** Heat-Resistance Low-Insertion Force Cu-Sn Plated Strip 72