

APPLIED PHYSICS EXPRESS Volume 3, Number 5, May 2010

Semiconductors, dielectrics, and organic materials

- 051001 **Nonpolar 4H-Polytype AlN/AlGaN Multiple Quantum Well Structure Grown on 4H-SiC(1100)**
Masahiro Horita, Tsunenobu Kimoto, Jun Suda
- 051002 **Nitrogen Related Electron Trap with High Capture Cross Section in n-Type GaAsN Grown by Chemical Beam Epitaxy**
Boussairi Bouzazi, Hidetoshi Suzuki, Nobuaki Kojima, Yoshio Ohshita, Masafumi Yamaguchi
- 051101 **Synthesis and Characterization of Highly Resistive Epitaxial Indium-Doped SnO₂**
Mark E. White, Oliver Bierwagen, Min-Ying Tsai, James S. Speck
- 051102 **ZnO Films with Very High Haze Value for Use as Front Transparent Conductive Oxide Films in Thin-Film Silicon Solar Cells**
Aswin Hongsingthong, Taweewat Krajangsang, Ihsanul Afdi Yunaz, Shinsuke Miyajima, Makoto Konagai
- 051103 **Topological Characterization for Textured Surfaces of Transparent Conductive Oxides Based on Their Fractal Structures**
Toshihiko Toyama
- 051301 **Fabrication of 1 Inch Mosaic Crystal Diamond Wafers**
Hideaki Yamada, Akiyoshi Chayahara, Yoshiaki Mokuno, Hitoshi Umezawa, Shin-ichi Shikata, Naoji Fujimori
- 051601 **All-Solution-Processed Selective Assembly of Flexible Organic Field-Effect Transistor Arrays**
Masataka Kano, Takeo Minari, Kazuhito Tsukagoshi

Photonics, quantum electronics, optics, and spectroscopy

- 052401 **Terahertz-Wave Spectrophotometry by Compton Backscattering of Coherent Transition Radiation**
Norihito Sei, Toshiharu Takahashi
- 052701 **10-W Peak-Power Picosecond Optical Pulse Generation from a Triple Section Blue-Violet Self-Pulsating Laser Diode**
Hideki Watanabe, Takao Miyajima, Masaru Kuramoto, Masao Ikeda, Hiroyuki Yokoyama
- 052702 **InGaN/GaN Blue Laser Diode Grown on Semipolar (30 $\bar{3}$ 1) Free-Standing GaN Substrates**
Po Shan Hsu, Kathryn M. Kelchner, Anurag Tyagi, Robert M. Farrell, Daniel A. Haeger, Kenji Fujito, Hiroaki Ohta, Steven P. DenBaars, James S. Speck, Shuji Nakamura

Spintronics, superconductivity, and strongly correlated materials

- 053001 **Electrical Detection of Vortex Core Polarity in Ferromagnetic Disk**
Kunihiro Nakano, Daichi Chiba, Koji Sekiguchi, Shinya Kasai, Norikazu Ohshima, Kensuke Kobayashi, Teruo Ono
- 053002 **Dynamic Magnetic Intermediate State during Nanosecond Spin Transfer Switching for MgO-Based Magnetic Tunnel Junctions**
Tatsuya Aoki, Yasuo Ando, Mikihiro Oogane, Hiroshi Naganuma
- 053003 **High Magnetoresistance Ratio and Low Resistance-Area Product in Magnetic Tunnel Junctions with Perpendicularly Magnetized Electrodes**
Kay Yakushiji, Kenji Noma, Takeshi Saruya, Hitoshi Kubota, Akio Fukushima, Taro Nagahama, Shinji Yuasa, Koji Ando

Device physics

- 054001 **A Cooper-Pair Light-Emitting Diode: Temperature Dependence of Both Quantum Efficiency and Radiative Recombination Lifetime**
Ikuo Suemune, Yujiro Hayashi, Shuhei Kuramitsu, Kazunori Tanaka, Tatsushi Akazaki, Hirotaka Sasakura, Ryotaro Inoue, Hideaki Takayanagi, Yasuhiro Asano, Eiichi Hanamura, Satoru Odashima, Hidekazu Kumano
- 054101 **Kelvin Probe Study of Dipole Formation and Annihilation at the HfO₂/Si Interface**
Noriyuki Miyata, Tetsuji Yasuda, Yasuhiro Abe
- 054201 **Novel Vertical Heterojunction Field-Effect Transistors with Re-grown AlGaIn/GaN Two-Dimensional Electron Gas Channels on GaN Substrates**
Masaya Okada, Yu Saitoh, Mitsunori Yokoyama, Ken Nakata, Seiji Yaegashi, Koji Katayama, Masaki Ueno, Makoto Kiyama, Tsukuru Katsuyama, Takao Nakamura

(Continued on third cover)

(Continued)

Nanoscale science and technology

- 055001 **In situ Transmission Electron Microscopy Observation of the Graphitization of Silicon Carbide Nanowires Induced by Joule Heating**
Hideo Kohno, Yuhki Mori, Seiji Takeda, Yutaka Ohno, Ichiro Yonenaga, Satoshi Ichikawa
- 055002 **Synthesis of a Closely Packed Carbon Nanotube Forest by a Multi-Step Growth Method Using Plasma-Based Chemical Vapor Deposition**
Yuichi Yamazaki, Masayuki Katagiri, Naoshi Sakuma, Mariko Suzuki, Shintaro Sato, Mizuhisa Nihei, Makoto Wada, Noriaki Matsunaga, Tadashi Sakai, Yuji Awano
- 055201 **Formation of Organic Nanodots with a Minimum Diameter of 40 nm Using Conventional Vacuum Vapor Deposition**
Manabu Nakata, Kenji Kawano, Mao Yasumatsu, Masayuki Yahiro, Chihaya Adachi

Plasmas, applied atomic and molecular physics, and applied nuclear physics

- 056201 **Low-Coherence Interferometry-Based Non-Contact Temperature Monitoring of a Silicon Wafer and Chamber Parts during Plasma Etching**
Chishio Koshimizu, Takayuki Ohta, Tatsuo Matsudo, Shigeki Tuchitani, Masafumi Ito
- 056202 **Development and Performance Test of Picosecond Pulse X-ray Excited Streak Camera System for Scintillator Characterization**
Takayuki Yanagida, Yutaka Fujimoto, Akira Yoshikawa, Yuui Yokota, Kei Kamada, Jan Pejchal, Varelly Chani, Noriaki Kawaguchi, Kentaro Fukuda, Koro Uchiyama, Kuniyoshi Mori, Ken Kitano, Martin Nikl

Device processing, fabrication and measurement technologies, and instrumentation

- 056701 **Hard-X-ray Photoelectron Diffraction from Si(001) Covered by a 0–7-nm-Thick SiO₂ Layer**
Igor Piš, Masaaki Kobata, Tomohiro Matsushita, Hiroshi Nohira, Keisuke Kobayashi

Applied Physics Express Vol. 3, No. 5 (2010)

発行 社団法人 応用物理学会
印刷 小宮山印刷工業株式会社
2010年5月25日発行

〒102-0073 東京都千代田区九段北1丁目12番3号 井門九段北ビル 電話 03-3238-1041
〒162-0808 東京都新宿区天神町78番地 電話 03-3260-5211

国内定価 8 000 円 年額 180 000 円 (JJAP & APEX)
正会員学会会員の購読料は JJAP 付加会費として各学会の会費を含む。