

Activities of the Technical Committee on DEI

List of Papers (Jan.2003-Dec.2003)

Theme : Recycling and Electric and Electronics materials suitable for environment, System

January 8, 2003 Terayama Pacific Building

- DEI-03-1 Ecomaterials
Kohmei Halada (National Institute for Materials Science)
- DEI-03-2 Recycling and Materials suitable for environment
Kunihiko Takeda (Nagoya University)
- DEI-03-3 Operation Performance and Impact of Home appliances Recycling Plant
Kenji Baba (Tokyo Eco Recycle Co.,Ltd)
- DEI-03-4 Technical Movement of Ecological (EM) Wire & Cable
Toshikazu Enami (Committee for Ecological Cable Promotion of JCMA)
- DEI-03-5 Environmental Assessment of Transformer & Switchgear for Power System
Etsuko Hirose (Advanced Technology R&D Center, Mitsubishi Electric Corporation)

Theme : Gas discharges, Liquid discharges, Discharges/Materials in general

January 22, 2003 Kyushu University

- DEI-03-6 Spectral Characteristic of the Light Emission from Pulsed Surface Discharge
Yutaka Ohshiro, Kiminobu Imasaka, Junya Suehiro and Masanori Hara (Kyushu University)
- DEI-03-7 Electrohydrostatics in Pin-to-Plate Gas Discharge System
Hiroyuki Kawamoto, Shinjiro Umezu, Ryuta Koizumi, Jumpei Shiraishi and Hiromu Yasuda (Department of Mechanical Engineering, Waseda University)
- DEI-03-8 A Voltage Distribution in an Electrolytic Solution under the Local Discharge Propagation
Hideharu Oniki, Daisuke Iwanaga, Tomoyuki Fujishima, Takahiro Yamashita and Hisao Matsuo (Nagasaki University)
- DEI-03-9 Conditions for Surface Leader Corona Inception in Atmospheric Air under Impulse Voltage (Part 2)
Masakuni Chiba (The University of Tokyo), Akiko Kumada (Tokyo Electric Power Co.), Kunihiko Hidaka (The University of Tokyo)
- DEI-03-10 Lightning protection characteristic in insulation tube and change in surface of insulation material of the tube type creeping discharge lightning protection devices
Shinsuke Hidaka, Seiji Yamashita, Naoya Anami, Kenichi Hirose, Masahisa Otsubo and Chikahisa Honda (Miyazaki University), Maki Sakae and Yasunari Morooka (Kyushu Electric Power Co. Inc.)
- DEI-03-11 Switching-surge Insulation Characteristics of Prefab Housings Used for Overhead Distribution Lines
Shinichi Sakamoto, Takahiko Yamashita, Tomoyuki Fujishima, Hisao Matsuo (Nagasaki University)
- DEI-03-12 Partial Discharge Control by Composite Insulation System of Subcooled Liquid Nitrogen at Atmospheric Pressure
Yasunori Matsumoto, Hiroshi Imakiire, Kiminobu Imasaka, Junya Suehiro and Masanori Hara (Kyushu University)
- DEI-03-13 Measurement of Space Charge Accumulated in rubber Dielectrics by the PEA Method
Satoshi KATO, Michihiro UCHIUMI (Dept. of Electronics and Information Engineering, Ariake National College of Technology) and Norimichi YOSHITAKE (Dept. of Chemical Science and Engineering, Ariake National College of Technology)
- DEI-03-14 Effects of Crosslinking Structure on the Space Charge Formation in Crosslinked Polyethylene
Naoshi Hirai, Yasumasa Maeno, Toshikatsu Tanaka, Yoshimichi Ohki (Waseda University), Minoru Okashita (Showa Electric Wire and Cable), Takashi Maeno (Communications Research Laboratory)
- DEI-03-15 Stable Operation and Dynamic Behavior of Pulse-Modulated Induction Thermal Plasma with Molecular Gases at Pressure of 30- 130 kPa
Shigeo Hida, Yasunori Tanaka, Tadahiro Sakuta (Kanazawa University)
- DEI-03-16 Influence of Pressure and Gas kinds during Low Pressure Thermal Plasma Spraying of

**Al₂O₃ Thick Film using Inductively Coupled Thermal Plasma
Atushi Maruhira, Yasunori Tanaka, Tadahiro Sakata (Kanazawa University)**

Theme : Organic Electronics/General

January 24, 2003 Meijo University

- DEI-03-17** Biosensor of Photosynthesis – Monitoring of Photosynthesis under Stress Conditions by Pulse Amplitude Fluorescence Spectroscopy –
Teruhiro TAKABE (Research Institute, Meijo University), Kenji AOKI (Graduate School of Environment and Human Sciences), Takashi HIBINO, Yoshito TANAKA, Masaaki OGURA, Masahiro TAWATA and Hiroshi SHIMOYAMA (Faculty of Science and Technology, Meijo University)
- DEI-03-18** Investigation of Emission Properties of Polymeric EL Using Poly-Fluorene Material
Daisuke FUJISHIMA (School of Engineering, Nagoya University), Kenta HOSOI, Tetsuo MORI, Teruyoshi MIZUTANI (Graduate School of Engineering, Nagoya University), Takakazu YAMAMOTO (Chemical Resources Laboratory, Tokyo Institute of Technology) and Naoyuki KITAMURA (ADCHEMCO Co.)
- DEI-03-19** Properties of Organic Light-Emitting Diode Using CsBr as Electron Injection Layer
Koji Yamada (School of Engineering, Nagoya University), Kenta Hosoi, Don Chan Cho, Tatsuo Mori, Teruyoshi Mizutani (Graduate School of Engineering, Nagoya University)
- DEI-03-20** Effect of ITO surface treatment methods on characteristics of organic light-emitting diode
Yuki IWAMA (Faculty of Engineering, Nagoya University), Kenta HOSOI, Don- Chan CHO, Tatsuo MORI and Teruyoshi MIZUTANI (Graduate School of Engineering, Nagoya University)
- DEI-03-21** Surface deformation of urethane-urea azo polymer induced by focused laser beam
M. Tsuchimori, T. Ikawa and O. Watanabe (TOYOTA Central R&D Labs., Inc.)
- DEI-03-22** Nano-insulation Bed with using Plasma Processes
Mikinori Suzuki and Shinzo Morita (Graduate School of Engineering, Nagoya University)
- DEI-03-23** MPF Optical Waveguide Fabrication
Chikao Yamasaki, Shinzo Morita (Graduate School of Engineering, Nagoya University)
- DEI-03-24** Light Waveguide with Using 2D Photonic Crystal
Yukinori HIRANO, Md. Abul KASHEM, Masaki MATSUSHITA and Shinzo MORITA (Graduate School of Engineering, Nagoya University)

Theme : Degradation Phenomena and Diagnostic Technique for Power Cable and Insulating Materials

January 29, 2003 IEE Japan HOMAT HORIZON Building

- DEI-03-25** AC Loss Current of Two Layered Dielectrics Composed of a Non-degraded and a Penetrated Water-Treed XLPE Sheets (III)
Tamon Ozaki, Shuhei Nakamura (Mie University), Jiro Kawai (Exsym Corporation)
- DEI-03-26** The effect of antioxidants on the initiation and propagation of electrical trees in XLPE
Daisuke Tanaka, Mitsugu Saito, Nobuyoshi Chizuwa, Kazuyosi Karasawa, Yasuo Sekii (Chiba Institute of Technology)
- DEI-03-27** The effect of antioxidants on the deterioration by PD in LDPE
Masatoshi Ohno, Koji Kikuchi, Hidenori Oguma, Yasuo Sekii (Chiba Institute of Technology)
- DEI-03-28** Actual Application of On-site Diagnostic Method for Water Treed XLPE Cable by Harmonics in AC Loss Current
Yukihiro Yagi, Kiyomi Adachi (The Furukawa Electric Co., Ltd.), Hideo Tanaka (VISCAS Corporation), Tomiyuki Tsujimoto, Masahiro Nakade (Tokyo Electric Power Co.)
- DEI-03-29** Evaluation of long term properties of out-door termination using polymeric insulator with SF₆ gas
Syohzou Iemura, Hiromitsu Tomioka (The Kansai Electric Power Co., Inc.), Yoshiyuki Inoue, Gaku Okamoto (J-Power Systems Corp.)
- DEI-03-30** Investigation of Residual Charge Measurement
K. Miyajima, K. Uchida (Chubu Electric Power Co.), H. Kon, K. Watanabe (Fujikura Ltd.)

Theme : Report on International Conference and Future Aspect

March 11, 2003 Jidosya-Kaikan(Tokyo)

- DEI-03-31 Report of 2002 CIGRE SC15/D1 (Materials and Emerging Technologies) Paris Meeting
M. NAGAO (Toyohashi University of Technology), T. TANAKA (Waseda University), T. MIZUTANI (Nagoya University) and F. ENDO (Hitachi)
- DEI-03-32 Report of 2002 IEEE ISEI/Double Client Conference
Ken Kimura (Kyushu Institute of Technology)
- DEI-03-33 Report on the 2002 Conference on Electrical Insulation and Dielectric Phenomena (CEIDP)
Yoshimichi OHKI (Waseda University)
- DEI-03-34 Report on 11th International Symposium on Electrets
Kaori Fukunaga (Communications Research Laboratory)
- DEI-03-35 Report of IEC TC15 and SC's Meeting in Boston
Yoshiaki Yamano (Chiba University), Eiki Watanabe (Tokyo Metro. University), Takao Maeda (Fuji Electric Co., Ltd.)
- DEI-03-36 Report of TC98 International Conference
Tatsuki Okamoto (Central Research Institute of Electric Power Industry), Ken Kimura (Kyushu Institute of Technology)

Theme : Electronics Apparatus Insulation and International Standards

September 10, 2003 Kogakuin University

- DEI-03-37 The Trend on International Standards of Test Methods for Resistance to Tracking of Electrical Insulating Materials
Eiki Watanabe (Tokyo Metropolitan University), Shuya Hagiwara (Hitachi Industrial Co.)
- DEI-03-38 The standards of thermal evaluation and thermal classification for electrical insulation
Tsuyoshi Kaneko (Japan Electrical Safety & Environment Technology Laboratory)
- DEI-03-39 Current states of CIGRE WG15.14 "Material Properties for Non-ceramic Outdoor Insulation"
Hiroya Homma (CRIEPI), Yukihiro Koshino (NGK), Yoshihiro Hirano (Toshiba) and Masayuki Nagao (Toyohashi University of Technology)
- DEI-03-40 Introduction of new standard regarding IEC/TC109 – Water adsorption test for printed board and creepage distances to avoid flashover –
Junkichi Sumiya (Japan Electrical Safety and Environment Technology Laboratories)
- DEI-03-41 Development of High Reliable Mold Resin for Semiconductor Package
Junpei Kusukawa, Toshiaki Ishii, Ryoza Takeuchi (Hitachi, Ltd.) Fujio Itoh, Hiromichi Suzuki (Renesas)
- DEI-03-42 Electrochemical Migration Resistance of Conductive Adhesive on Printed Circuit Board
Makoto Nakamura, Hirokazu Tanaka (ESPEC CORP.)
- DEI-03-43 Surge-proof characteristic of the printed circuit board
Hiroki Matsuda, Katsuhiko Shutoh, Eisuke Masada (Science University of Tokyo)

Theme : Functional Organic Thin Film/General

November 19, 2003 Shinshu University

- DEI-03-44 Effect of insertion of n-type porphyrin nano-layer on the photovoltaic properties at the TiO₂/phthalocyanine interface
Yuji OHMORI, Eiji ITOH and Keiichi MIYAIRI (Faculty of Engineering, Shinshu University)
- DEI-03-45 Application of thin polyimide films to a high sensitive humidity sensor
Yuichi NOIKE, Eiji ITOH and Keiichi MIYAIRI (Faculty of Engineering, Shinshu University)
- DEI-03-46 Electric Characteristics Of Organic Field-Effect Transistor Based On Tantalum Oxide Gate Insulator layer
Teppey HIGUCHI, Eiji ITOH and Keiichi MIYAIRI (Faculty of Engineering, Shinshu University)
- DEI-03-47 Investigation of the surface potential built across the Alq₃ films on a metal electrode by Kelvin probe and second-harmonic generation
Kei YOSHIZAKI, Takaaki MANAKA and Mitsumasa IWAMOTO (Faculty of Engineering, Tokyo Institute of Technology)

- DEI-03-48 ZTP-PDMS derived organic/inorganic hybrid materials – functionalization by composite processing –
Takuya SHINDOU (Suzuka Fuji Xerox Co., Ltd.), Hideki KONISHI, Shuhei NAKAMURA and Kanichi KAMIYA (Faculty of Engineering, Mie University)
- DEI-03-49 Development of Elastic Separator used for PEFC
Mitsuhiro HISHIDA (Faculty of Engineering, Mie University), Tetsuya TOMIMURA (Mie Prefectural Research Institute) and Shuhei NAKAMURA (Faculty of Engineering, Mie University)
- DEI-03-50 Light Emission due to Surface Plasmon Excitations from Polymer Film with dispersed Cyanine Dyes on Metal Thin Film
Wataru Saito (Graduate School of Science and Technology, Niigata University), Yasuo Ohdaira, Kazunari Shinbo, Keizo Kato, Futao Kaneko (Department of Electrical and Electronic Engineering, Center for Transdisciplinary Research, Niigata University)
- DEI-03-51 Control of FET characteristics by substrate temperature and gate voltage during deposition
Hirotaka SAKUMA, Shun-ichi MAEDA, Masatoshi SAKAI, Masaaki IIZUKA, Masakazu NAKAMURA and Kazuhiro KUDO (Department of Electronics and Mechanical Engineering, Chiba University)
- DEI-03-52 Organic Thin Film Laser Using super-precision Machinery processing resonator
Y. Morimoto, M. Ichikawa, T. Koyama, Y. Tanaguchi (Department of Functional Polymer Science, Faculty of Textile Science and Technology, Shinshu University), M. Hanaoka, Y. Fujita (R&D Division, Sankyo-seiki corporation)
- DEI-03-53 Analysis and suppression of a transparent electrode sputter damage generating mechanism for dual-sided emission organic light-emitting diode
Kohei TSUGITA, Yutaka KURIYA, Musubu ICHIKAWA, Toshiki KOYAMA and Yoshio TANIGUCHI (Faculty of Textile Science and Technology, Shinshu University)
- DEI-03-54 Design and Fabrication of Wave-guided Organic Light-Emitting Diodes – For Realization of Electrically pumped Organic Semiconductor Laser –
Masaaki NAKADAIRA, Musubu ICHIKAWA, Toshiki KOYAMA and Yoshio TANIGUCHI (Department of Functional Polymer Science, Faculty of Textile Science and Technology, Shinshu University)