RadTech Asia 2016 (Tokyo)全講演名リスト

Area Overview

Chair: Teruo Orikasa (RadTech Japan)
David Harbourne (Heraeus Noblelight America LLC, USA)

AO-01 **An Overview of Current and Future Markets for UV/EB Curing Technologies**
9:30-10:00 * D. Harbourne
Heraeus Noblelight America LLC

AO-02 **Markets Overview and Progress of UV/EB Curing Technology in China**
10:00-10:30 * J. Yang, Y. Qv, C. Tong
Sun Yat-sen University

AO-03 **Korean Market Overview**
11:00-11:30 * I. H. Kim
Shinyoung Rad.Chem.Ltd., Seoul, Korea

AO-04 **Overview of UV/EB Technology and Market in Japan**
11:30-12:00 * Z. Komiya
JSR Corporation

AO-05 **Market Overview 2015: Overview of the European Market for Radiation Curing**
12:00-12:30 * D. Helsby
Rahn AG

Keynote Lecture

Chair: Kimihiro Matsukawa (Kyoto Institute of Technology, Japan)

KL-01 **Present and Future Prospect of UV/DUV LEDs & LDs**
13:40-14:40 * H. Amano
Nagoya University

S1 LED Related Technology

Chair: Kazuo Ashikaga (Heraeus K.K., Japan)

S1-01 **Photoinitiators for UV-LED Applications**
15:10-15:40 * K. Dietliker
Swiss Federal Institute of Technology Zurich (ETH-Z), Department of Chemistry and Applied Biosciences, Vladimir-Prelog-Weg 1, CH-8093 Zurich, Switzerland

S1-02 **Photopolymerization under LED: from Tack-Free Coatings to Carbon Fiber Composites**
15:40-16:10 * X. Allonas, M. Lecompère, M. Retailleau, F. Karasu, A. Ibrahim, C. Croutxé-Barghorn
University of Haute Alsace, 3b rue Alfred Werner, 68100 Mulhouse, FRANCE

S1-03 **Silicone Encapsulants for High Brightness LED**
16:10-16:40 * M. Itoh[1], M. Suto[1], T. Iimura[1], J. H. Chae[2], R. G. Schmidt[3], T. Nakata[1]
[1]Dow Corning, Ichihara, Chiba, Japan, [2]Dow Corning, Gwanghyewon-Myon, Jincheon-Gun, Korea. [3]Dow Corning, Midland, Michigan, U.S.A.

G2 Advanced Materials and Applications

Chair: Toshiyuki Oyama (Yokohama National University, Japan)
Christopher Bowman (University of Colorado, USA)

G2-01 **Structure-Property Relationships of Photo-Polymerized CuAAC Networks for the Application of Tough Industrial Thermosets**
15:10-15:40
* C. N Bowman, H. B. Song, A. Baranek, M. McBride, A. Alzahrani
Department of Chemical and Biological Engineering, University of Colorado Boulder, 596 UCB, Boulder, CO 80309-0596, USA

G2-02 **Free Surface Command Layer for the Photoalignment of Polymer Liquid Crystals**
15:40-16:10 * T. Seki[1], K. Fukuhara[1], D. Tanaka[1], T. Nakai[1], M. Hara[1], S. Nagano[2]
[1]Department of Molecular Design and Engineering, Graduate School of Engineering, Nagoya University, Furo-cho, Chikusa, Nagoya 464-8603, Japan, [2]Nagoya University, Venture Business Laboratory, Furo-cho, Chikusa, Nagoya 464-8603, Japan

G2-03 **Light-Driven Delivery and Release of Materials Using Particle-Stabilized Droplets**
16:10-16:40 * S. Fujii[1], M. Paven[2], H. Mayama[3], H. Kawashima[1], H.-J. Butt[2], Y. Nakamura[1]
[1]Department of Applied Chemistry, Faculty of Engineering, Osaka Institute of Technology 5-16-1 Omiya, Asahi-ku, Osaka, 535-8585, Japan., [2]Department of Chemistry, Asahikawa Medical University, 2-1-1-1 Midorigaoka-Higashi, Asahikawa 078-8510, Japan., [3]Physics at Interfaces, Max Planck Institute for Polymer Research, Ackermannweg 10, D-55128 Mainz, Germany

G2-04 **Graphene Aerogel Produced by Effective Radiation-Induced Self-Assembly and its Application for Oil-Water Separation**
16:50-17:10 J. Li, J. Li
Shanghai Institute of Applied Physics, Chinese Academy of Sciences, Shanghai, 201800, P. R. China

G2-05 **Attractive Properties by EB Induced Formation of Active Terminated Atoms with Dangling Bonds**
17:10-17:30 Y. Nishi[1], M. C. Faudree[1], A. Tonegawa[1], M. Takashiri[1], R. Ohyama[1], M. Tomizawa[1], M. Kanda[2], N. Inoue[2]
[1]Graduate school of Engineering, Tokai University, 4-1-1 Kitakaname, Hiratsuka, Japan, [2]Center of Applied Superconductivity & Sustainable Energy Research, Chubu University, 1200 Matsumoto, Kasugai, Aichi 487-8501, Japan

G2-06 **Selective Surface Modification at Photo-Irradiated Area of a Polymer Film by Reaction Development Patterning**
17:30-17:50 T. Oyama, H. Kawabata, K. Watanabe, H. Ogasawara
Department of Advanced Materials Chemistry, Faculty of Engineering, Yokohama National University, 79-5 Tokiwadai, Hodogaya-ku, Yokohama 2240-8501, Japan

G1 Radiation and Photochemistry

Chair: Hiroto Kudo (Kansai University, Japan)
Jun Nie (Beijing University of Chemical Technology, China)

G1-01 **Migratory Photoinitiator for Oxygen Inhibition Resistance**
15:10-15:40 * J. Nie
College of Science, Beijing University of Chemical Technology, Beijing,100029, PR China

G1-02 **Femtosecond Pulse Radiolysis Study on Decomposition Processes of Alkanes**
15:40-16:10 * Y. Yoshida, S. Nishii, T. Kondoh, M. Gohdo, K. Kan, J. Yang
The Institute of Scientific and Industrial Research, Osaka University, 8-1 Mihogaoka, Ibaraki, Osaka, Japan

G1-03 **Application to Photoreactive Materials of Photochemical Generation of Superbases with High Efficiency**
16:10-16:40 * K. Arimitsu
Department of Pure and Applied Chemistry, Faculty of Science and Technology, Tokyo University of Science, 2641 Yamazaki, Noda, Chiba 278-8510, Japan

G1-04 **Visible-Light Initiated Thiol-Michael Addition Photopolymerization Reactions**
16:50-17:10 S. Chatani[1], C. N. Bowman[2]
[1]Mitsubishi Rayon Co., Ltd., Yokohama, Japan and University of Colorado, Boulder, U. S. A., [2]University of Colorado, Boulder, U. S. A.

G1-05 **Pulse Radiolysis Study of Reaction Kinetics on Radiation Induced Reaction of Polystyrene**
17:10-17:30 M. Gohdo, T. Kondoh, K. Kan, Y. Jinfeng, S. Tagawa, Y. Yoshida
The Institute of Scientific and Industrial Research, Osaka University, 8-1 Mihogaoka, Ibaraki, Osaka 567-0047, Japan

S4 Lithography and Nanoimprint

Chair: Masamitsu Shirai (Osaka Prefecture University, Japan)
Yoshihiko Hirai (Osaka Prefecture University, Japan)

S4-01 **Current Issues and Breakthrough toward Sub 10nm Patterning by Nanoimprint Technology**
15:10-15:40 M. Yasuda, * Y. Hirai
Graduate School of Engineering, Osaka Prefecture University, Gakuencho, Nakaku, Sakai, 599-8531 Japan

S4-02 **Current Status and Prospects of Nanoimprint**
15:40-16:10 * S. Matsui
University of Hyogo, 3-1-2 Koto, Kamigori, Ako, Hyogo 678-1205, Japan

S4-03 **Development of Next Generation Block Copolymer Lithography Materials From Design and Synthesis to Orientation Control of Nanodomains**
16:10-16:40
* T. Hayakawa
Department of Materials Science and Engineering, Tokyo Institute of Technology, 2-12-1-S8-36 Ookayama, Meguro-ku, Tokyo 152-8552, Japan

S4-04 **Development of EUV Lithographic Technology at University of Hyogo**
16:50-17:20 * T. Watanabe, T. Harada
Center for EUVL, Laboratory of Advanced Science and Technology for Industry, University of Hyogo, 3-1-2 Kouto, Kamigori-cho, Ako-gun, Hyogo 678-1205, Japan

S4-05 **Tellurium-Containing Resist Materials for Extreme Ultraviolet (EUV) Exposure Tool**
17:20-17:40 M. Fukunaga, H. Takeda, H. Kudo
Department of Chemistry and Materials Engineering, Faculty of Chemistry, Materials and Bioengineering, Kansai University, 3-3-35, Yamate-cho, Suita-shi, Japan

S4-06 **Super-Large Mold Fabrication Process for Nanoimprint Mass-Production**
17:40-18:00 T. Kasai, M. Yamanaka, I. Sakata, T. Mizawa
Soken Chemical & Engineering Co., Ltd., 1-13-1, Hirosehigashi, Sayama-shi, Saitama-ken, Japan

S1 LED Related Technology

Chair: Xavier Allonas (University of Haute Alsace, France)
Haruyuki Okamura (Osaka Prefecture University, Japan)

S1-04 **Investigation of Cure Behavior of UV Curable Coatings for Optical Fiber by UV-LED Lamps**
9:00-9:20 K. Takase, H. Uchida, Z. Komiya
Tsukuba Research Laboratories, JSR Corporation, 25 Miyukigaoka, Tsukuba, Ibaraki 305-0841 Japan

S1-05 **Cationic Photopolymerization of Bisphenol A Diglycidyl Ether**
9:20-9:40 K. Jian[1,2], Y. Chen[2], G. Liu[1], J. Nie[1], J. Yang[2]
[1]College of Materials Science and Engineering, Beijing University of Chemical Technology, Beijing 100029, China, [2]Changzhou Tronly New Electronic Materials Co.,Ltd, Changzhou 213121, China

S1-06 **Photocuring of Acrylates Using Deep UV LEDs**
9:40-10:00 H. Okamura[1], S. Niizeki[2], T. Ochi[2], A. Matsumoto[1]
[1]Department of Applied Chemistry, Osaka Prefecture University, 1-1 Gakuen-cho, Naka-ku, Sakai, Osaka 599-8531, Japan, [2]Nikkiso Giken Co., Ltd., 1-5-1, Asahigaoka, Hakusan, Ishikawa 924-0004, Japan

S1-07 **What Happens, When TPO is Selectively Irradiated by Mono-Chromatic LED?**
10:00-10:20 K. Ashikaga, K. Kawamura
Heraeus KK Noblelight Division, 2-9-3 Otsuka, Bunkyo-ku, Tokyo 112-0012, Japan

S1-08 **Development of High Output Power Deep Ultraviolet Light-Emitting Diodes**
10:50-11:20 * T. Inazu[1], C. Pernot[1], H. Ichinokura[1], T. Ochi[1], H. Tomozawa[2], H. Ishiguro[1], H. Amano[3], I. Akasaki[4]
[1]UV-LED Division, Nikkiso Giken Co., Ltd., 1-5 Asahigaoka, Hakusan, Japan, [2]Hakusan Factory, Nikkiso Co., Ltd., 1-5 Asahigaoka, Hakusan, Japan, [3]Center for Integrated Research of Future Electronics, Nagoya University, Furo-cho, Chikusa, Nagoya, Japan, [4]Faculty of Science and Technology, Meijo University, 1-501 Shiogama-guchi, Tempaku, Nagoya, Japan

S1-09 **New Photoinitiators Having Good Absorption for the LED Light Source**
11:20-11:40 N. Sato
(Japanese) *ADEKA Corporation, 2-35, Higashiogu-7-chome, Arakawa-ku, Tokyo, Japan*

S2 3D Printing Technology

Chair: Takashi Miyata (Kansai University, Japan)

S2-01 **3D Gel Printer Inducing Soft-Matter Innovation**
9:00-9:30 * H. Furukawa, M. Kawakami, M. Makino, A. Khosla, A. Saito, K. Sakai, M. Kodama, K. Takamatsu, M. Wada, H. Tamate
Soft & Wet matter Engineering Lab (SWEL), Life-3D Printing Innovation Center (LPIC), Yamagata University

S2-02 **Photopolymerization Kinetics of Different Chain Sizes of Bi-Functional Acrylic Monomers Using Real Time FT-IR**
9:30-9:50 K. Taki, T. Taguchi, R. Hayashi, H. Ito
Kanazawa University, Japan

S2-03 **Latest Domestic and Foreign Situations Concerning Chemical Substance Management and Safe Use of 3D Printer Materials**
9:50-10:20
(Japanese) * K. Suzuki
Technohill Corporation

G2 Advanced Materials and Applications

Chair: Yasunari Maekawa (Japan Atomic Energy Agency, Japan)
Dean Webster (North Dakota State University, USA)

G2-07 **EB Induced Tensile Shear Strength of CFRP/AlLamination Joint**
9:00-9:20 D. Kitahara1), A. Minegishi2), M. Kanda2), Y. Matsumura1), Y. Nishi1)
1)Tokai university, Hiratsuka, 259-1292, Japan, 2)Chubu University, Kasugai, 487-8501, Japan

G2-08 **EB-Strengthening Methods of ERTPs Composites Inside**
9:20-9:40 R. Nomura1), M. C. Faudree1), A. Takahashi1), M. Kanda2), I. Jimbo1), Y. Nishi1)
1)Tokai University, Hiratsuka 259-1292, Japan, 2)Chubu University, Kasugai 487-8501, Japan

G2-09 **EB Induced Fracture Resistance of Ceramics**
9:40-10:00 N. Tsuyuki1), K. Iwata1), K. Takashina1), N. Yamaguchi1), H. Hasegawa1), A. Takahashi1), M. C. Faudree2), Y. Matsumura2), Y. Nishi2)
1)Graduate School of Engineering, Tokai University, Hiratsuka, 259-1292, Japan, 2)School of Engineering, Tokai University, Hiratsuka, 259-1292, Japan

G2-10 **Multi-Functional O-Methacyloyloximes as Novel Photolabile Crosslinkers**
10:00-10:20 K. Suyama1), H. Tachi2)
1)Faculty of Liberal Arts and Sciences, Osaka Prefecture University, 1-1 Gakuencho, Nakaku, Sakai, Osaka 599-8531, Japan,
2)Textile & Polymer Section, Technology Research Institute of Osaka Prefecture, 7-1 Ayumino-2, Izumi, Osaka 594-1157, Japan

G2-11 **Controlled Surface Chemistry and Properties through Photo-Enforced Stratification**
10:50-11:20 * C. A. Guymon, C. J. Cook
Department of Chemical & Biochemical Engineering, University of Iowa, Iowa City, IA, USA

G2-12 **Functional Fabrics by Radiation Induced Graft Polymerization Methods**
11:20-11:40 J. Li, M. Yu
Shanghai Institute of Applied Physics, Chinese Academy of Sciences, Shanghai, 201800, P. R. China

G2-13 **Novel Dendritic Thiol-Ene Photopolymers with Excellent UV-Curing Properties**
11:40-12:00 K. Aoki1), R. Imanishi2), M. Yamada1)
1)Department of Chemistry, Faculty of Science, Tokyo University of Science, 1-3 Kagurazaka, Shinjuku-ku, Tokyo, 162-8601, Japan., 2)Department of Molecular Design and Engineering, Graduate School of Engineering,Nagoya University, Furo-cho, Chikusa-ku, Nagoya, 464-8603, Japan.

G1 Radiation and Photochemistry

Chair: Teruhiko Ogawa (The Nippon Synthetic Chemical Industry Co., Ltd., Japan)

G1-07 **Relation between Reactivity of Iodonium Salts in NIR Photoinitiating Systems Comprising Anions with Different Coordination Behavior**
10:50-11:10
(Japanese) A. Shiraishi1), D. Oprych2), C. Schmitz2), T. Brömme2), A. Halbhuber2), Y. Ueda1), B. Strehmel2)
1)San-Apro Ltd., 1-40, Goryo-Ohara, Nishikyoku, Kyoto, 615-8245, Japan, 2)Niederrhein University of Applied Sciences, Department of Chemistry and Institute for Coatings and Surface Technology, Adlerstr. 32, D-47798 Krefeld, Germany

G1-08 **Correlation between Surface Functional Groups and Bondingstrength in VUV Surface Activated Bonding**
11:10-11:30 M. Sakai, G. Yamada, S. Matsuzawa, M. Wasamoto, K. Hirose
(Japanese) *Ushio Inc., 1-6-5 Marunouchi Chiyoda-ku Tokyo, Japan*

G1-09 **UV-Curing Components for Food Packaging and LED Cure – the Perfect Storm?**
11:30-11:50 E. Bellotti1), A. Casiraghi1), M. Morone1), G. Norcini1), S. R. Postle2)
1)IGM Resins Italia S.r.l., Insubrias BioPark, Via Roberto Lepetit 34, 21040 Gerenzano (VA), Italy; 2)IGM Resins Inc., 3300 Westinghouse Blvd, Charlotte, NC 28273, USA

G3 Radcure Equipment, Testing, and Measurement

Chair: Haruyuki Okamura (Osaka Prefecture University, Japan)
Kazuo Ashikaga (Heraeus K.K., Japan)
Kentaro Taki (Kanazawa University, Japan)

G3-01 **Mercury-Free Electrodeless Metal Halide Lamp and its Equipment**
11:40-12:00 H. Zhang, K. Satou, S. Saito, Y. Oda, T. Todo, T. Ibi
Iwasaki Electric Co., Ltd., 1-1, Ichiriyama-cho, Gyoda-shi, Saitama, 361-8505, Japan

G3-02 **Experimental and Numerical Study of 3D UV Inkjet Printer: Impact of Oxygen Inhibition on Precision**
13:30-14:00 * K. Taki, Y. Watanabe, H. Ito, M. Ohshima
Kanazawa University, Japan.

G3-03 **Development and Application of Micro-Particle-Induced X/Gamma-Ray Emission**
14:00-14:30 * T. Satoh1), M. Koka1), N. Yamada1), T. Kamiya1), K. Mima2), K. Dobashi3)
1)Takasaki Advanced Radiation Research Institute, National Institutes for Quantum and Radiological Science and Technology, 1233 Watanuki-machi, Takasaki, Gunma 370-1292, Japan, 2)The Graduate School for the Creation of New Photonics Industries, 1955-1, Kurematsu, Nishiku, Hamamatsu, Shizuoka 431-1202, Japan. 3)Faculty of Medicine, Gunma University, 4-2 Aramaki-machi, Maebashi, Gunma 371-8510, Japan

G3-04 **New Photon Delivery System**
14:40-15:00 K. Kawamura, K. Ashikaga
Heraeus.K.K, Noblelight Division, 2-9-3 Otsuka Bunkyo-ku Tokyo, Japan

G3-05 **Preparation and Properties of UV Curable Anti-Glare Coatings Containing Light Absorption and Scattering PMMA/Nano-Carboncomposite Particles**
15:00-15:20
L. Hu, Z. Yang, X. Zhang, Z. Liu, P. Xia, L. Gong, L. Jiang
Hubei Institute of Aerospace Chemotechnology, Xiangyang, Hubei 441003, PR China

S3 Printed Electronics

Chair: Kanji Suyama (Osaka Prefecture University, Japan)

S3-01 **Transparent Conductive Electrode Technology of Silver Nanowires**
13:30-13:50 E. Nakazawa, S. Yamaki
Business Development Center, Showa Denko K. K., Ichihara Chiba 290-0067, Japan

S3-02 **Insulation Material for Inkjet Printing**
13:50-14:10 M. Shimura
TAIYO INK MFG.CO.,LTD., 900 Hirasawa, Ranzan-machi, Hiki-gun Saitama, Japan

S3-03 **Novel Photo-Thermally Cured Acrylic Anchor Resins for Screen Printing -Design for Fine Line Electrodes-**
14:10-14:30 K. Takada1), J. Hamuro1), T. Matoba1), M. Yamashita2), M. Shirai3), H. Okamura3)
(Japanese) *1)SHIN-NAKAMURA CHEMICAL Corp., 687 Arimoto, Wakayama City, 640-8390, Japan, 2)Industrial Technology Center of Wakayama Prefecture, 60 Ogura, Wakayama City, 649-6261, Japan, 3)Department of Applied Chemistry, Osaka Prefecture University, 1-1 Gakuen-cho, Naka-ku, Sakai, Osaka 599-8531, Japan*

S3-04 **Fabrication of Hybrid Materials and Surface Modification for Printed Electronics**
14:40-15:10 * T. Miyashita
Tohoku University (Emeritus Professor), Miyashita Research Office, Sendai, Japan

G2 Advanced Materials and Applications

Chair: Allan Guymon (University of Iowa, USA)
Yoshiyuki Saruwatari (Osaka Organic Chemical Industry Ltd., Japan)

G2-14 **New Aspects of Radiation-Induced Graftpolymerization and its Application to Fuel Cell Polymer Electrolyte Membranes**
13:30-14:00 * Y. Maekawa
Takasaki Advanced Radiation Research Institute, National Institutes for Quantum and Radiological Science and Technology (QST)

G2-15 **Rational Design of Stimuli-Responsive Polymeric Materials Using Photocrosslinking and their Applications**
14:00-14:30 * T. Miyata
Department of Chemistry and Materials Engineering, Kansai University, Suita, Osaka 564-8680, Japan

G2-16 **Development and Characteristic of the UV Coating Material Based on Silicon Technology**
14:40-15:00 Y. Matsuo1), Y. Nakanishi1), M. Akutsu2)
(Japanese) *1)High Performance Polymer Division, KANEKA CORPORATION, Takasago, Hyogo 676-8688, Japan, 2)Radtech Support, Abiko, Chiba 270-1114, Japan*

G2-17 **Preparation of Heteropoly Acid-Hybridized Photopolymers for Transparent High Refractive Index Materials**
15:00-15:20 T. Morinaga1), M. Kume1), Y. Ohe1), T. Hoashi2), M. Takafuji2), H. Ihara2)
(Japanese) *1)Toppan Printing Co., Ltd., 4-2-3 Takanodaiminami, Sugito-machi, Saitama, Japan, 2)Kumamoto University, 2-39-1, Kurokami, Chuo-ku, Kumamoto, Japan*

G4 Functional Coatings

Chair: Nobuhiro Kawatsuki (University of Hyogo, Japan)
Yasushi Oe (TOPPAN PRINTING CO., LTD., Japan)

G4-01 **Specialty Film**
9:00-9:30 T. Matsui, * Y. Okada
Society for Specialty Film, 1-23-3, Nishi-Nippori, Arakawa-ku, Tokyo, Japan

G4-02 **Development of UV Curable Oligomers for Flexible Hard Coatings**
9:30-9:50 K. Kanda
The Nippon Synthetic Chemical Industry Co., LTD., Muroyama 2-chome 13-1, Ibaraki city, Osaka Pref., Japan

G4-03 **Nanodomain Control in Photo-Cured Coatings via Precise Polymerization Techniques**
9:50-10:20 * T. Suga, K. Katayama, E. Ando, H. Nishide
Department of Applied Chemistry, Waseda University, Tokyo 169-8555, Japan

G4-04 **Development and Examination of UV-Curable Hard Coating Hybrid Thin Film Having a 9H Pencil Hardness**
10:50-11:10 R. Muraguchi, M. Kumazawa, Y. Hakoshima
(Japanese) *JGC Catalysts and Chemicals Ltd, 13-2 Kitaminato-machi, Wakamatsu-ku, Kitakyushu-shi, Fukuoka-ken 808-0027, JAPAN*

G4-05 **Development of UV-Curable Resin for the Surface Protective Materials of the Flexible Displays.**
11:10-11:30 N. Inoue, M. Ito, K. Yamaguchi
(Japanese) *DIC Corporation, 12, Yawata-kaigandori, Japan*

G4-06 **Development of Fluorochemical Surface Modifiers for UV Curable Hard Coatings**
11:30-11:50 R. Hashide, Y. Ozaki, N. Koike
(Japanese) *DIC Corporation, 12, Yawatakaigandori, Ichihara, Chiba 290-8585, Japan*

G4-07 **Highly-Filled Nanoparticle Coatings**
11:50-12:10 N. Sugiyama
Corporate Research Materials Laboratory, 3M Japan Limited, 3-8-8 Minami Hashimoto, Chuo-ku, Sagamihara-shi, Kanagawa, Japan

S3 Printed Electronics

Chair: Nobuhiro Ishikawa (Soken Chemical & Engineering Co., Ltd., Japan)

S3-05 **Advanced Printing Technology for Flexible Device Fabrication**
9:00-9:30 * T. Kamata1),2), Y. Mishima2), S. Nishi2)
(Japanese) *1)National Institute of Advanced Industrial Science and Technology, 2)Japan Advanced Printed Electronics Technology Research Association*

S3-06 **Nano-Ink Development for Wearable Printed Electronics**
9:30-10:00 * K. Suganuma, M. Nogi, H. Koga, J. Jiu, T. Sugahara
Institute of Scientific and Industrial Research, Osaka University, 8-1 Mihogaoka, Ibaraki, Osaka 567-0047, Japan

G2 Advanced Materials and Applications

Chair: Masakazu Washio (Waseda University & RadTech Asia Organization, Japan)
Atsushi Shishido (Tokyo Institute of Technology, Japan)

G2-18 **EB Induced Resistances to Misting, Elastic Deformation and Fracture for LCD Thin Panel**
9:00-9:20 A. Takahashi[1], R. Nomura[1], K. Iwata[1], T. Shibuya[1], Y. Matsumura[1], Y. Nishi[1, 2]
[1]Graduate School of Engineering, Tokai University, 4-1-1 Kitakaname, Hiratsuka, Kanagawa, Japan, [2]Department of Materials Science, Tokai University, 4-1-1 Kitakaname, Hiratsuka, Kanagawa, Japan

G2-19 **EB Induced Fracture Resistance of a Ti/Thermoplastic Polymers (PC, ABS) Joints**
9:20-9:40 H. Hasegawa[1], Y.Enomoto[2], N.Tsuyuki[1], M.C.Faudree[2], Y.Matsumura[2], I.Jimbo[2], Y.Nishi[2]
[1]Graduate School of Engineering, Tokai University, Hiratsuka, 259-1292, Japan, [2]School of Engineering, Tokai University, Hiratsuka, 259-1292, Japan

G2-20 **EB Induced Adhesion Force of Polyurethane(PU)/Metal(Cu,Al,Ti)**
9:40-10:00 A. Yagi[1], S. Takase[1], M. Kanda[2], I. Jimbo[1], Y. Nishi[1]
[1]Tokai University, Hiratsuka, 259-1292, Japan [2]Chubu University, Kasugai 487-8501, Japan

G2-21 **EB Induced Adhesion Improvement of CFRP/18-8 Stainless Steel Sheets**
10:00-10:20 A. Minegishi[1], D. Kitahara[1], K. Masae[2], I. Jimbo[1], Y. Nishi[1]
[1]Tokai University, 4-1-1 Kitakaname, Hiratsuka, Kanagawa, Japan, [2]Center of Applied Superconductivity & Sustainable Energy Research, Chubu University, Kasugai, 487-8501, Japan

G2-22 **Development of Acrylic Syrup Utilizing RAFT Polymerization and its Application to Uvcurable Pressure Sensitive Adhesive**
10:50-11:10 N. Ishikawa, T. Yoshida
Soken Chemical & Engineering Co., Ltd., 1-13-1, Hirosehigashi, Sayama-shi, Saitama, Japan

G2-23 **Development of Cyclopolymerizable Monomers Giving Tetrahydrofuran Rings in the Polymer Backbone**
11:10-11:30 T. Gomi, T. Kaneko, A. Tachibana, Y. Arimoto
Nippon Shokubai Co.,Ltd, 5-8 Nishi Otabi-cho,Suita,Osaka 564-0034 Japan

G2-24 **EB Induced Adhesion of Different Polymers Laminations**
11:30-11:50 S. Takase[1], A. Yagi[1], C. Kubo[1], M. Kanda[2], Y. Matsumura[1], Y. Nishi[1]
[1]Tokai University, 4-1-1 Kitakaname, Hiratsuka, Kanagawa, Japan, [2]Center of Applied Superconductivity & Sustainable Energy Research, Chubu University, Kasugai, 487-8501, Japan

G5 Others

Chair: Nobuhiro Ishikawa (Soken Chemical & Engineering Co., Ltd., Japan)
Takeo Suga (Waseda University, Japan)

G5-01 **Formulation of Blend Type UV Curable Acrylic Pressure Sensitive Adhesives**
10:00-10:20 T.Takeda
Advanced Material Laboratory, The Nippon Synthetic Chemical Industry Co., LTD., Muroyama 2-chome 13-1, Ibaraki, Osaka, Japan

G5-02 **New EB Curable CI-Flexo Ink Technology Providing Sustainable Printing Solutions for Packaging Applications**
10:50-11:20 * I. Rangwalla
Energy Sciences Inc.: 42 Industrial Way Wilmington MA 01887, USA

G5-03 **Bio-Based Photocurable Polymer Systems**
11:20-11:50 * D. C. Webster, A. Paramarta, P. Sengupta, S. Silbert
North Dakota State University, Fargo, North Dakota, USA

G4 Functional Coatings

Chair: Koji Arimitsu (Tokyo University of Science, Japan)

G4-08 **Photochemical and Photophysical Molecular Alignment Control for Photonic and Mechanical Applications**
13:30-14:00 * A. Shishido[1, 2], K. Hisano[1], J. Wang[1], N. Akamatsu[1]
[1]Laboratory for Chemistry and Life Science, Tokyo Institute of Technology, R1-12, 4259 Nagatsuta, Midori-ku, Yokohama, 226-8503, Japan, [2]PRESTO, JST, Saitama, Japan

G4-09 **Facile Fabrication of Photoaligned Films Using Photoinactive Liquid Crystalline Polymer Coated with Photoreactive Monomers**
14:00-14:30 R. Fujii, S. Minami, T. Uchikawa, Y. Fujioka, M. Kondo, * N. Kawatsuki
Department of Applied Chemistry, Graduate School of Engineering, University of Hyogo, 2167 Shosha Himeji, Hyogo 671-2280 Japan

G4-10 **Self-Healing Organic-Inorganic Hybrid Coatings by Photocrosslinking with Thiol-Contained Polysilsesquioxane**
14:30-15:00 * K. Matsukawa[1),4)], K. Nishio[2], I. Urano[3], D. Tohmori[3], K. Mitamura[4], S. Watase[4]
[1]Faculty of Molecular Chemistry and Engineering, Kyoto Institute of Technology, Matsugasaki, Sakyo-ku, Kyoto 606-8585, Japan, [2]Osaka Electro-Communication University, [3]Doshisha University, [4]Osaka Municipal Technical Research Institute

G5 Others

Chair: Satoyuki Chikaoka (ADEKA CORPORATION, Japan)

G5-04 **Cross-Linking Reagent Derived from Cysteine and its Application to Anionic UV Curing**
13:30-13:50 M. Furutani, S. Sato, K. Arimitsu
Department of Pure and Applied Chemistry, Tokyo University of Science, 2641 Yamazaki, Noda, Chiba 278-8510, Japan

G5-05 **Study on UV Aluminium Paste or Pigmented Mono-Coat**
13:50-14:10 S. Zhang, L. Yu
Guangzhou Wraio chemicals Co., Ltd. Guangzhou 510660, P. R. China

G5-06 **Polymer Flow Scheme under Chemical Substances Control Law**
14:10-14:40 * T. Yoshida, K. Akasaka
(Japanese) *Toray Research Center, Inc., 3-3-7 Sonoyama, Otsu, Shiga 520-8567, Japan*

G5-07 **Notification of Chemical Substances Control Law for Low Molecular Weight Substance**
14:40-15:10 * S. Sueta
(Japanese) *Chemicals Evaluation and Research Institute*

G2 Advanced Materials and Applications

Chair: Munehiro Hatai (SEKISUI CHEMICAL CO., LTD., Japan)

G2-25 **Study of Relationship between Adhesion and Monomer Structure**
13:30-13:50 K. Noura
(Japanese) *Osaka Organic Chemical Industry Ltd., Matsumoto-machi, Hakusan City, Ishikawa, Japan*

G2-26 **Development of Functional Elastomers**
13:50-14:10 M. Kouda, Y. Tomimori, K. Fujii, T. Matsuyama
(Japanese) *Osaka Organic Chemical Industry LTD., Katayama-Cho, Kashiwara City, Osaka, Japan*

G2-27 **EB Induced Adhesive Force of Polycarbonate (PC) / Light Metals (Al, Ti) Lamination**
14:10-14:30 M. Tomizawa[1], M.C. Faudree[2], T. Sagiri[1], M. Kanda[3], I. Jimbo[2], Y. Nishi[2]
[1]Graduate School of Engineering Tokai University, Hiratsuka 259-1292, Japan, [2]Department of Materials Science Tokai University, Hiratsuka 259-1292, Japan, [3]Chubu University, Kasugai 487-8501, Japan