PROGRAM

9:00 – 9:15 *Opening Remarks*

Yasuaki Einaga (Keio University)
Kohei M. Itoh (Dean, Faculty of Science and Technology, Keio University)
Yoshimasa Goto (Executive Director, JST)

Chair: Yasuaki Einaga (Keio University)

9:15 – 9:45 **Yasuaki Einaga** (Keio University, JAPAN)
"Recent Development on Boron-Doped Diamond Electrodes"

9:45 – 10:10 Shota Iizuka, Zdenek Futera, Takeshi Watanabe, Keisuke Natsui, Yasuaki Einaga, **Yoshitaka Tateyama** (NIMS, JAPAN)
"Theoretical Study on Redox Reactions at Boron-Doped Diamond / Water Interfaces"

10:10 – 10:35 **Francesca Celine I. Catalan** (Kim Group, RIKEN, JAPAN), Norihiko Hayazawa, Yasuyuki Yokota, Raymond A. Wong, Takeshi Watanabe, Yasuaki Einaga, Emiko Kazuma, Yousoo Kim
"Localized Surface Characterization of Boron-Doped Diamond Electrode"

10:35 – 10:45 *Coffee Break*

Chair: Yasuyuki Yokota (RIKEN)

10:45 – 11:15 **Carlos A. Martinez-Huitle** (Federal University of Rio Grande do Norte, BRAZIL), Paola Villegas-Guzman, Soliu Oladejo Ganiyu, Elisama Vieira dos Santos, Djalma Ribeiro da Silva, Marco A. Quiroz
"Electrochemical Technologies for Wastewater Treatment: Fundamentals, Current Advances and New Trends"

11:15 – 11:35 **Genki Ogata** (Niigata University, JAPAN), Kai Asai, Seishiro Sawamura, Hiroyuki Kusuhara, Yasuaki Einaga, Hiroshi Hibino
"A Microsensing System for the *in vivo* Real-Time Monitoring of Local Drug Kinetics"

11:35 – 12:50 *Photo & Lunch*

12:50 – 13:30 **Student Poster Session "A (PA–1 to PA–12)"**

13:30 – 13:40 *Preparation for Session "B"*

13:40 – 14:20 **Student Poster Session "B (PB–1 to PB–13)"**

14:20 – 14:30 *Coffee Break*

Chair: Yousoo Kim (RIKEN)

14:30 – 15:00 **Nianjun Yang** (University of Siegen, GERMANY)
"Diamond and Related Materials for Energy Storage Applications"

15:00 – 15:20 **Takeshi Kondo** (Tokyo University of Science, JAPAN)
"Electrochemical Application of Boron-Doped Diamond Powder"

15:20 – 15:40 **Hiroshi Kobayakawa** (HORIBA Advanced Techno, Co., Ltd., JAPAN), Kazuhiro Miyamura, So Takagi, Yasuaki Einaga
"Development of Residual Chlorine Monitor Using Boron-Doped Diamond Electrode"

15:40 – 15:50 *Coffee Break*

Chair: Tomoya Sugai (University of Tsukuba)

15:50 – 16:10 **Yasufumi Takahashi** (Kanazawa University, JAPAN), Tomohiro Ando, Kai Asai, Yuanshu Zhou, Yasuaki Einaga, Takeshi Fukuma
"Nanoscale Electrochemical Reactivity Imaging on Boron-Doped Diamond Using Scanning Electrochemical Cell Microscopy"

16:10 – 16:30 **Masashi Nakamura** (Chiba University, JAPAN)
"Infrared Spectroscopy of Boron-Doped Diamond Electrode During Electrochemical Oxidation"

16:30 – 16:45 **Andrea Fiorani** (Keio University, JAPAN), Irkham, Giovanni Valenti, Francesco Paolucci, Yasuaki Einaga
"Electrogenerated Chemiluminescence at Boron Doped Diamond"

16:45 – 16:55 *Coffee Break*

Chair: Kazuya Nakata (Tokyo University of Science)

16:55 – 17:25 **Siegfried R. Waldvogel** (Johannes Gutenberg University Mainz, GERMANY)
"Electrifying Organic Synthesis – Boron-Doped Diamond the Key to Go Beyond Contemporary Limits"

17:25 – 17:40 **Takashi Yamamoto** (Keio University, JAPAN), Yasuaki Einaga
"Electrosynthesis Using Boron-Doped Diamond"

17:40 – 18:05 **Tsuyoshi Saitoh** (University of Tsukuba, JAPAN)
"Cathodic Reduction on Boron-Doped Diamond Electrode"

18:05 – 18:15 *Closing Remarks*

Yoichiro Matsumoto (Chair, JST-ACCEL Program; President, Tokyo University of Science)
Yasuaki Einaga (Keio University)

STUDENT POSTER SESSION "A"
(12:50 – 13:30; P-A1 to P-A12)

P-A1 **Kai Asai** (Keio University), Takashi Yamamoto, Yasuaki Einaga
"Development of Electrochemical Aptamer-Based Sensor for Drug Sensing Based on Diamond Electrode"

P-A2 **Shuji Ezura** (Tokyo University of Science), Takeshi Kondo, Toshifumi Tojo, and Makoto Yuasa
"Application of Painted Diamond Electrode to Electrolytic Water Treatment"

P-A3 **Dan Igarashi** (Keio University), Tsuyoshi Saitoh, Shigeru Nishiyama, Takashi Yamamoto, Yasuaki Einaga
"Anodic Oxidation of Isoeugenol on Boron-Doped Diamond Electrodes"

P-A4 **Irkham** (Keio University), Andrea Fiorani, Yasuaki Einaga
"Electrogenerated Chemiluminescence by the *in situ* Generation of H_2O_2 in Na_2CO_3 Aqueous Solution at Boron-Doped Diamond Electrodes"

P-A5 **Naoki Kamoshida** (Keio University), Norihito Ikemiya, Masashi Nakamura, Nagahiro Hoshi, Yasuaki Einaga
"*In-Situ* IR Spectroscopy on Polycrystalline and Epitaxal BDD Electrode"

P-A6 **Yoshiki Kimoto** (Tokyo University of Science), Takeshi Kondo, Toshifumi Tojo, Makoto Yuasa
"Surface Modification of Diamond Electrode via Electron-Beam Grafting"

P-A7 **Shinichi Kusaka** (Keio University), Junya Yaita, Takeshi Watanabe, Susumu Sato, Mutsuko Hatano, Yasuaki Einaga
"Fabrication of Boron-Doped Diamond Films by Bias-Enhanced Nucleation Method"

P-A8 **Ayaka Mamada** (Tokyo University of Science), Takeshi Kondo, Toshifumi Tojo, Makoto Yuasa
"Application of Palladium Nanoparticle-Embedded Porous Diamond Spherical Particle Catalysts to Flow Reaction System"

P-A9 **Masako Masuda** (Tokyo University of Science), Takeshi Kondo, Toshifumi Tojo, Makoto Yuasa
"Preparation of diamond Solid-Acid-Catalyst via Electron-Beam Grafting"

P-A10 **Kenjo Miyashita** (Tokyo University of Science), Takeshi Kondo, Toshifumi Tojo, Makoto Yuasa
"Fabrication of Boron-Doped Nanodiamond and Application to Aqueous Capacitors"

P-A11 **Seiya Sugai** (Tokyo University of Science), Takeshi Kondo, Toshifumi Tojo, Makoto Yuasa

"Sensitive Detection of Serotonin Using Conductive Polymer-Modified Diamond Electrode"

P-A12 **Jing Xu** (Keio University), Yasuaki Einaga

"Electrochemical Reduction of CO_2 on sp^2 Contained Boron-Doped Diamond (BDD) Electrodes"

STUDENT POSTER SESSION "B"
(13:40 – 14:20; P-B1 to P-B12)

P-B1 **Tomohiro Ando** (Kanazawa University), Kai Asai, Yuanshu Zhou, Yasuaki Einaga, Takeshi Fukuma, Yasufumi Takahashi
"Electrochemical Imaging of Boron-Doped Diamond Electrodes Using Scanning Electrochemical Cell Microscope"

P-B2 **Ai Hanawa** (Keio University), Kai Asai, Genki Ogata, Hiroshi Hibino, Yasuaki Einaga
"*In vivo* Real-Time Measurement of Drugs Using Diamond Microelectrodes"

P-B3 **Prastika Krisma Jiwanti** (Keio University), Yasuaki Einaga
"Electrochemical Deposition of Palladium on BDD Electrode for CO_2 Electrochemical Reduction to CO"

P-B4 **Seiji Kasahara** (Keio University), Raymond A. Wong, Yasuyuki Yokota, Masashi Nakamura, Yousoo Kim, Yasuaki Einaga
"Spectroscopic Study on Surface Hydroxy Groups of Diamond Electrodes"

P-B5 **Sebastian Lips** (Johannes Gutenberg University Mainz), Siegfried R. Waldvogel
"Anodic Dehydrogenative C,C Cross-Coupling Reactions of Phenols with Heterocycles"

P-B6 **Siyang Liu** (Keio University), Irkham, Yasuaki Einaga
"Study of Voltammetric Techniques on Boron Doped Diamond Electrode"

P-B7 **Tomohiro Matsunaga** (Tokyo University of Science), Takeshi Kondo, Toshifumi Tojo, Makoto Yuasa
"Screen-Printed Diamond Electrode for Sensitive Electrochemical Detection of Ciprofloxacin"

P-B8 **Kazuma Ogura** (Tokyo University of Science), Takeshi Kondo, Toshifumi Tojo, Makoto Yuasa
"Multi Component Electrochemical Detection with Diamond Electrodes"

P-B9 **Mayuko Saitoh** (Tokyo University of Science), Takeshi Kondo, Toshifumi Tojo, Makoto Yuasa
"Preparation of Pt/PBI/BDDP and Its Application to Highly Durable PEFC Catalyst"

P-B10 **Azusa Sato** (Tokyo University of Science), Takeshi Kondo, Toshifumi Tojo, Makoto Yuasa
"Electrochemical Detection Using Conductive DLC Microelectrodes"

P-B11 **Kazuaki Takagi** (Keio University), Takashi Yamamoto, Yasuaki Einaga
"Fabrication of Flower-Like Boron-Doped Diamond and Electrochemical Detection of H_2O_2 and Glucose"

P-B12 **Mai Tomisaki** (Keio University), Seiji Kasahara, Keisuke Natsui, Norihito Ikemiya, Yasuaki Einaga
"Selective Electrochemical Production of Carbon Monoxide from Carbon Dioxide Using Boron-Doped Diamond Electrode"

P-B13 **Michael Zirbes** (Johannes Gutenberg University Mainz), Siegfried R. Waldvogel
"Electrolyzed Carbonate as Green Oxidizer for the Degradation of Lignin"