

Program

March 18th, Tuesday

Opening Remarks 9:00 - 9:30	
Prof. Dr. Yasuaki Einaga (Symposium Chair, Keio University)	
Prof. Dr. Tojiro Aoyama (Dean, Faculty of Science and Technology, Keio University)	
Prof. Dr. Kohei Tamao (President, Chemical Society of Japan, Research Supervisor of CREST Project)	
Opening Lecture Chairperson: Yasuaki Einaga	
L-1	09:30-10:00
	Akira Fujishima (Tokyo University of Science, Japan), Chiaki Terashima, Kazuya Nakata "Diamond electrode –Wide potential window and CO ₂ reduction–"
L-2	10:00-10:30
	Yasuaki Einaga (Keio University, Japan) "Recent development on boron-doped diamond electrodes"
Break 10:30-10:45	
Electrochemical Sensors Chairperson: Jinfang Zhi	
O-1	10:45-11:10
	Romeu C. Rocha-Filho (São Carlos Federal University, Brazil), Orlando Fatibello-Filho "Boron-doped diamond based sensors: using electrochemical pretreatment to fine-tune their activity toward specific analytes"
O-2	11:10-11:35
	Arben Merkoçi (ICREA & Institut Catala de Nanociencia i Nanotecnologia, Spain) "Carbon based electrodes in nanomaterials-involved biosensing systems"
O-3	11:35-12:00
	Orawon Chailapakul (Chulalongkorn University, Thailand), Siriwan Nantaphol, Weena Siangproh "Development of cholesterol detection using silver nanoparticles modified boron-doped diamond electrode coupled with paper-based analytical devices (PADs)"
Lunch 12:00-13:30	
Health and Environmental Related Issues Chairperson: Romeu C. Rocha-Filho	
O-4	13:30-13:50
	Nicolae Spataru (The Romanian Academy, Romania), Petre Osiceanu, Tanta Spataru, Akira Fujishima "Effect of chemical termination of BDD substrate on the resistance to fouling during methanol oxidation of platinum particles"
O-5	13:50-14:10
	Xin Chen, Dandan Li, Hong Wang, Jinfang Zhi (Chinese Academy of Sciences, China) "A high-performance wastewater treatment system for organic pollutants degradation using a boron-doped diamond electrode and enhanced by TiO ₂ -zeolite photocatalyst"
O-6	14:10-14:30
	Stéphane Fierro (IHI and Keio University, Japan), Hideyuki Saya, Yasuaki Einaga "Electrochemical biosensing using boron doped diamond microelectrode"
Break 14:30-14:45	
Health and Environmental Related Issues Chairperson: Siegfried R. Waldvogel	
O-7	14:45-15:10
	Kazuya Nakata (Tokyo University of Science, Japan), Chiaki Terashima, Akira Fujishima, Yasuaki Einaga "Electrochemical production of formaldehyde from CO ₂ and seawater"

O-8	15:10-15:30	
		<u>Sachio Yoshihara</u> (Utsunomiya University, Japan), Muthu.Murugananthan, Vembu Suryanarayanan, Yanrong Zhang "20 years of progress of our diamond electrochemistry -featuring decomposition of various Endocrine disrupting chemicals by use of boron doped diamond"
O-9	15:30-15:50	
		<u>Tsuyoshi Ochiai</u> (Kanagawa Academy of Science and Technology, Japan), Shoko Tago, Kazuo Hirota, Yasuaki Einaga, Akira Fujishima "Application of boron-doped diamond microelectrodes for dental treatment with pinpoint ozone-water production"
Break 15:50-16:00		
Short Oral for Poster Presentation Chairperson : Takeshi Kondo		
P-1	16:00-16:02	<u>Gabriel F. Pereira, Romeu C. Rocha-Filho</u> (São Carlos Federal University, Brazil), Nerilso Bochi, Sonia R. Biaggio "Electrochemical degradation of the herbicide picloram using a BDD anode in a flow reactor"
P-2	16:02-16:04	<u>Orlando Fatibello-Filho</u> (São Carlos Federal University, Brazil), Patrícia B. Deroco, Bruna C. Lourencao, Roberta A. Medeiros, Romeu C. Rocha-Filho "Simultaneous determination of colorants in candies using a boron-doped diamond electrode coupled to a flow injection system with multiple pulse amperometric detection"
P-3	16:04-16:06	<u>Orlando Fatibello-Filho</u> (São Carlos Federal University, Brazil), Tiago A. Silva, Luiz C. S. Figueiredo-Filho, Fernando C. Vicentini, Patrícia B. Deroco, Romeu C. Rocha-Filho "Square-wave voltammetric determination of the herbicide bentazon using a cathodically pretreated boron-doped diamond electrode"
P-4	16:06-16:08	<u>Mariana Medina, Carmen C. Mayorga-Martinez</u> (Institut Catala de Nanociencia i Nanotecnologia, Spain), Yuki Honda, Flavio Pino, Takeshi Watanabe, Tribidasari A. Ivandini, Yasuaki Einaga, Arben Merkoçi "Boron-doped diamond based platform in lab-on-a-chip system for biosensing application"
P-5	16:08-16:10	<u>Siriwan Nantaphol</u> (Chulalongkorn University, Thailand), Orawon Chailapakul, Weena Siangproh "Ultrasensitive and simple method for the determination of N-Acetyl-L-Cysteine in drug formulations using diamond sensor"
P-6	16:10-16:12	<u>Ai Sugitani</u> (Keio University, Japan), Michinobu Katayama, Takeshi Watanabe, Yoshinori Matsumoto, Yasuaki Einaga "Fabrication of microdevices using boron-doped diamond for electrochemical analysis "
P-7	16:12-16:14	<u>Yuya Ishii</u> (Keio University, Japan), Tribidasari A. Ivandini, Kazutaka Murata, Yasuaki Einaga "Development of electrolyte-free ozone sensors using boron-doped diamond electrodes"
P-8	16:14-16:16	<u>Taiki Kojima</u> (Keio University, Japan), Keisuke Natsui, Takashi Yamamoto, Yasuaki Einaga, Shigeru Nishiyama "Cathodic reduction on a boron-doped diamond electrode to synthesize new neolignans"
P-9	16:16-16:18	<u>Yusuke Tamura</u> (Tokyo University of Science, Japan), Takeshi Kondo, Tatsuo Aikawa, Takeshi Watanabe, Yasuaki Einaga, Makoto Yuasa "Electrochemical oxygen demand measurement using diamond electrode"
P-10	16:18-16:20	<u>Daiki Kusaka</u> (Tokyo University of Science, Japan), Takeshi Kondo, Tatsuo Aikawa, Makoto Yuasa "Fabrication of boron-doped diamond microelectrodes for local electroanalysis"

P-11	16:20-16:22	<u>Ikuto Udagawa</u> (Tokyo University of Science, Japan), Takeshi Kondo, Tatsuo Aikawa, Isao Shitanda, Yoshinao Hoshi, Masayuki Itagaki, Makoto Yuasa "Microelectrode array effect at screen-printed diamond electrode"
P-12	16:22-16:24	<u>Ayaka Ito</u> (Tokyo University of Science, Japan), Takeshi Kondo, Tatsuo Aikawa, Makoto Yuasa "Surface modification of diamond nanoparticle with octadecyl group"
P-13	16:24-16:26	<u>Takuji Morimura</u> (Tokyo University of Science, Japan), Takeshi Kondo, Tatsuo Aikawa, Makoto Yuasa "Platinum nanoparticle-embedded porous diamond spherical particles for a stable catalyst"
P-14	16:26-16:28	<u>Toru Saito</u> (Tokyo University of Science, Japan), Tatsuo Aikawa, Takeshi Kondo, Makoto Yuasa "Surface modification of porous diamond spherical particles with various pore sizes"
P-15	16:28-16:30	<u>Hidetake Masuda</u> (Tokyo University of Science, Japan), Takeshi Kondo, Tatsuo Aikawa, Makoto Yuasa "Application of boron-doped diamond powder to fuel cell cathode catalyst support"
P-16	16:30-16:32	<u>Narumi Okada</u> (Tokyo University of Science, Japan), Takeshi Kondo, Tatsuo Aikawa, Makoto Yuasa "Fabrication of conductive diamond nanoparticles"
P-17	16:32-16:34	<u>Mihoko Kikuchi</u> (Tokyo University of Science, Japan), Takeshi Kondo, Tatsuo Aikawa, Makoto Yuasa "Preparation of boron-doped diamond powder-supported cobalt polypyrrole for PEFC cathode catalyst"
P-18	16:34-16:36	<u>Satoshi Ikezoe</u> (Tokyo University of Science, Japan), Takeshi Kondo, Tatsuo Aikawa, Makoto Yuasa "Electrochemical properties of porous diamond electrodes fabricated by thermal treatment"
P-19	16:36-16:38	<u>Keita Yajima</u> (Tokyo University of Science, Japan), Takeshi Kondo, Tatsuo Aikawa, Hiromasa Okano, Masanori Hayase, Makoto Yuasa "Fabrication of porous boron-doped diamond pillar array for electric double-layer capacitor"
P-20	16:38-16:40	<u>Hirofumi Imamura</u> (Tokyo University of Science, Japan), Kazuya Nakata, Chiaki Terashima, Takeshi Kondo, Yasuaki Einaga, Makoto Yuasa, Akira Fujishima "Electrochemical Reduction of Carbon Dioxide Using Porous Boron-Doped Diamond Electrodes"
P-21	16:40-16:42	<u>Hiroshi Yamaguchi</u> (Tokyo University of Science, Japan), Kazuya Nakata, Chiaki Terashima, Yasuaki Einaga, Hideki Sakai, Masahiko Abe, Akira Fujishima "Electrochemical reduction of carbon dioxide at surface modified boron-doped diamond electrodes"
P-22	16:42-16:44	<u>Ryota Hishinuma</u> (Tokyo University of Science, Japan), Chiaki Terashima, Kazuya Nakata, Takeshi Kondo, Makoto Yuasa, Akira Fujishima "Photocatalytic activity of pn junction of TiO ₂ / BDD electrode"
Poster Session 16:44-18:00		
Banquet 18:00-20:00		

March 19th, Wednesday

Fundamental Properties of Diamond Electrodes		
Chairperson: Nicolae Spataru		
O-10	09:00-09:25	<u>Takeshi Kondo</u> (Tokyo University of Science, Japan) "Covalent surface modification of diamond electrode"
O-11	09:25-09:50	<u>Nianjung Yang</u> (Fraunhofer Institute for Applied Solid State Physics, Germany) "Diamond nanoelectrochemistry"
O-12	09:50-10:10	<u>Yoshitaka Tateyama</u> (National Institute for Materials Science (NIMS), Japan), Zdenek Futera, Takeshi Watanabe, Yasuaki Einaga "Theoretical study on structures and electronic states of boron-doped diamond electrode / water interfaces"
O-13	10:10-10:30	<u>Takeshi Watanabe</u> (Keio University, Japan), Yasuaki Einaga "Design of boron-doped diamond with sp ² -bonded carbon impurities according to the electrochemical applications"
O-14	10:30-10:45	<u>Takashi Yamamoto</u> (Keio University, Japan), Keisuke Natsui, Miku Akahori, Yasuaki Einaga "Boron-doped diamond as superconductor"
Break 10:45-11:00		
Short Oral for Poster Presentation		
Chairperson: Kazuya Nakata		
P-23	11:00-11:02	<u>Pandian Laksmipathiraj</u> (Tokyo University of Science, Japan), P. Sudhagar, Chiaki Terashima, Kazuya Nakata, Takeshi Kondo, Makoto Yuasa, Akira Fujishima "Photocatalytic reduction of CO ₂ in water using nanodiamond"
P-24	11:02-11:04	<u>Hyunseob Lim</u> (RIKEN, Japan), Yousoo Kim "Preliminary investigation on boron-doped diamond film by scanning tunneling microscopy"
P-25	11:04-11:06	<u>Zdenek Futera</u> (Keio University, NIMS, Japan), Yoshitaka Tateyama, Yasuaki Einaga "Investigation of boron doped diamond interfacial reactions by first principle calculations"
P-26	11:06-11:08	<u>Muthu Muruganathan</u> (PSG College of Technology, India), M. Kumaravel, G. Bhaskar Raju, Sachio Yoshihara "Anodic oxidation of pharmaceutically active micropollutants by using boron doped diamond and platinum electrodes"
P-27	11:08-11:10	<u>Keisuke Natsui</u> (Keio University, Japan), Takashi Yamamoto, Takeshi Watanabe, Yoichi Kamihara, Yasuaki Einaga "Modulation of critical current density in superconducting diamond by surface modification"
P-28	11:10-11:12	<u>Yuki Honda</u> (Keio University, Japan), Tribidasari A. Ivandini, Takeshi Watanabe, Kazutaka Murata, Yasuaki Einaga "An electrolyte-free system for ozone generation using heavily boron-doped diamond electrodes"
P-29	11:12-11:14	<u>Miku Akahori</u> (Keio University, Japan), Keisuke Natsui, Takashi Yamamoto, Yasuaki Einaga "Functionalization of superconducting diamond by click reaction"
P-30	11:14-11:16	<u>Yu Mukuda</u> (Keio University, Japan), Takeshi Watanabe, Akihiko Ueda, Yoshiki Nishibayashi, Yasuaki Einaga "Electrochemical properties of phosphorus doped diamond"
P-31	11:16-11:18	<u>Shuhei Shibano</u> (Keio University, Japan), Tribidasari A. Ivandini, Chiaki Terashima, Kazuya Nakata, Yasuaki Einaga "Development of electrochemical method for biodiesel production"

P-32	11:18-11:20	<u>Takahiro Matsui</u> (Keio University, Japan), Takeshi Watanabe, Yasuaki Einaga "Influence of (100) facets on the electrochemical properties in boron-doped diamond electrodes"
P-33	11:20-11:22	<u>Leo K. Oyama</u> (Keio University, Japan), Takeshi Watanabe, Yasuaki Einaga "Development of microwave plasma CVD with quartz tube reactor for diamond film synthesis"
P-34	11:22-11:24	<u>Bakhadir Rismetov</u> (University of Indonesia, Indonesia), Tribidasari A. Ivandini, Endang Saepudin, Yasuaki Einaga "Electrochemical detection of hydrogen peroxide at Pt-deposited boron doped diamond and its application in melamine strip test"
Poster Session 11:24-12:30		
Lunch 12:30-13:45		
Electrochemical Organic Synthesis Chairperson: Arben Merkoçi		
O-15	13:45-14:10	
		<u>Siegfried R. Waldvogel</u> (Johannes Gutenberg University Mainz, Germany), Bernd Elsler "Anodic cross-coupling reaction of aryls using BDD electrodes"
O-16	14:10-14:30	
		<u>Tsuyoshi Saitoh</u> (University of Tsukuba, Japan), Shigeru Nishiyama "Anodic oxidation using BDD electrode in methanol as unique reaction media"
Break 14:30-14:45		
Electrochemical Sensors Chairperson: Orawon Chailapakul		
O-17	14:45-15:05	
		<u>Raphaël Trouillon</u> (EPFL, Switzerland) "Biological applications of BDD electrodes: resistance to biological and chemical foulings"
O-18	15:05-15:25	
		<u>Tribidasari A. Ivandini</u> (University of Indonesia, Indonesia; Keio University, Japan), Yasuaki Einaga "Yeast-based BOD sensor development using gold-modified boron doped diamond electrodes"
O-19	15:25-15:40	
		<u>Weena Siangproh</u> (Srinakharinwirot University, Thailand), Sudkate Chaiyo, Orawon Chailapakul "Development of a sensitive boron-doped diamond electrode for automatic stripping analysis of trace mercury in food/environment"
O-20	15:40-16:05	
		<u>Heidi B. Martin</u> (Case Western Reserve University, USA) "Diamond-film electrodes for implantable neural devices"
Closing Remarks 16:05-16:15		
Prof. Dr. Yasuaki Einaga (Symposium Chair, Keio University)		