ISMET 7
International Society for Microbial Electrochemistry and Technology
GLOBAL CONFERENCE

International Society for Microbial Electrochemistry and Technology

October 7 - 11, 2019 OIST Okinawa, Japan

Program

Program

	October 7 (Monday)	
9:00	Auditorium	
	Registration	
9:40		Seaside House
		Introduction to workshop session
10:00		OIST Campus
		OIST Campus Tour
12:30	Lunch	
13:30	Auditorium	
	Opening Ceremony (Chair: Mami Kainuma)	
14:30	Keynote Lecture 1 **Yujie Feng** (Chair: Igor Goryanin)	
15:10	Coffee	
	B250	C210
	Session 1 (Chair: Tian Zhang)	Session 2 (Chair: Bernardino Virdis)
15:40	**Sarah Glaven**	**Eileen Yu**
16:00	**Sunil A. Patil**	**Pilar Sánchez Peña**
16:20	**Tyler Arbour**	**Krishna P. Katuri**
16:40	**Rusen Zou**	**Uwe Schröder**
17:00	**Defeng Xing**	**Yuting He**
17:20	**Chao-Chin, Chang**	**Pier-Luc Tremblay**
	Grano Restaurant	
18:00	Welcome reception	
21:00		

	October 8 (Tuesday)	
9:00	Auditorium	
	Keynote Lecture 2 **Shunichi Ishii** (Chair: Yuri Gorby)	
9:40	B250	C210
9:50	Session 3 (Chair: Sarah Glaven)	Session 4 (Chair: Korneel Rabaey)
10:00	**Leonard Tender**	**Annemiek Ter Heijne**
10:20	**Lin Su**	**Tom Sleutels**
10:40	**Yoshihide Tokunou**	**Arpita Nandy**
11:00	Coffee	
11:10	**Ricardo O. Louro**	**Bernardino Virdis**
11:30	**Ana V. Silva**	**Anna Prokhorova**
11:50	**Dario R. Shaw**	**Cesar I. Torres**
12:10	**Kengo Inoue**	**Xin Wang**
12:30	Lunch	
	(Chair: Mirella Di Lorenzo)	(Chair: Stefano Freguia)
13:30	**Atsushi Kouzuma**	**Chang-Ping Yu**
13:50	**Xueqin Zhang**	**Mira Sulonen**
14:10	**Grace W Chong**	**Juliette Monetti**
14:30	**Benjamin Korth**	**Satoshi Wakai**
14:50	Coffee	
15:10	Auditorium	
	Keynote Lecture 3 **Ioannis Ieropoulos** (Chair: Ricardo Louro)	
15:50	Lightning talks 1 (Chair: Ricardo Louro)	
16:10	Group photo	
16:30	Conference Room	
	Poster session 1	
18:20	Free time	

Program

	October 9 (Wednesday)	
9:00	Auditorium	
	Keynote Lecture 4 **Stefano Freguia** (Chair: Chang-Ping Yu)	
9:40	B250	C210
9:50	Session 5 (Chair: Annemiek Ter Heijne)	Session 6 (Chair: Eileen Yu)
10:00	**Pavlina Theodosiou**	**Korneel Rabaey**
10:20	**Laura Rovira Alsina**	**Bin Bian**
10:40	**Lukasz Szydlovski**	**Deepak Pant**
11:00	Coffee	
11:10	**Abdullah AI-Mamun**	**Falk Harnisch**
11:30	**Robert Keith Brown**	**Jeannine Mayr**
11:50	**Pim de Jager**	**Igor Vassilev**
12:10	**Qian Fu**	**Paniz Izadi**
12:30	Lunch	
	(Chair: Cesar Torres)	(Chair: Uwe Schröder)
13:30	**Hong Liu**	**Tian Zhang**
13:50	**Makarand Ghangrekar**	**Ludovic Jourdin**
14:10	**Albert Guisasola**	**Huihui Zhou**
14:30	**Jung Rae Kim**	**Paula Andrea Hernandez**
14:50	Coffee	
15:10	Auditorium	
	Keynote Lecture 5 **Mirella Di Lorenzo** (Chair: Ioannis Ieropoulos)	
15:50	Lightning talks 2 (Chair: Ioannis Ieropoulos)	
16:10	Conference Room	
	Poster session 2	
18:00	Transportation to Rizzan Sea Park Hotel Tancha Bay	
19:00 21:00	Banquet & ISMET Awards	

	October 10 (Thursday)	
9:00	Auditorium	
	Keynote Lecture 6 **Sebastia Puig** (Chair: Hong Liu)	
9:40	B250	C210
9:50	Session 3 (Chair: Leonard Tender)	Session 6 (Chair: Shunichi Ishii)
10:00	**Antonin Prévoteau**	**Shohei Yamada**
10:20	**Marcus Edwards**	**Johannes E. Reiner**
10:40	**Katrin Dohnt**	**Cheng Li**
11:00	Coffee	
11:10	Auditorium	
	Keynote Lecture 7 **Yuri Gorby** (Chair: Falk Harnisch)	
11:50	Closing Ceremony (Chair: Igor Goryanin)	
12:30	Lunch	
13:30	Seaside House	
	Workshop **Enrico Marsli**	
15:50	Coffee	
16:00 18:00	Workshop **Deepak Pant**	

	October 11th (Friday)
9:00	Seaside House
	Workshop **Ecobot demonstration**
10:00	Coffee
10:20	Workshop: **Benjamin Korth and Falk Harnisch I**
12:30	Lunch
13:30	Workshop **Benjamin Korth and Falk Harnisch II**
16:10	Coffee
16:30 18:00	Workshop **Maria Salar and Pavlina Theodosiou**

October 7 (Monday)

13:30-14:30 Opening Ceremony

Auditorium

Chair Person: Mami Kainuma *(Group Leader, Biological Systems Unit, OIST)*

13:30-13:40 Welcome Address

Robert Baughman *(Executive Vice President for Technology Development and Innovation/ Vice CEO (OIST))*

13:40-13:50 Welcome Remarks

Sarah Glaven *(President of International Society for Microbial Electrochemistry and Technology)*

13:50-14:20 Welcome Talk

Igor Goryanin *(Professor, Biological Systems Unit, OIST)*

Biological Electrochemical Systems. Practical applications

14:30-15:10 Plenary Session

Auditorium

Keynote Lecture 1

Chair Person: Igor Goryanin *(Professor, Biological Systems Unit, OIST)*

Speaker: Yujie Feng *(Harbin Institute of Technology, China)*

Microbial electrochemical systems for wastewater treatment: from fundamental research to pilot-scale application

15:40- 17:40 Oral Sessions

B250 Seminar Room

Session 1:
Microbial ecology: enzymatic and metabolic pathways in microbial electrochemistry

Chair Person: Tian Zhang

15:40-16:00

OS Ⅰ-1 Towards in situ engineering of electroautotrophic microbial communities
Sarah Glaven *U.S. Naval Research Laboratory, USA*

C210 Seminar Room

Session 2:
Materials: electrodes and membranes for BES

Chair Person: Bernardino Virdis

OS Ⅱ-1 Quick development of anaerobic biocathodes with polymer-modified gas diffusion electrodes for the conversion of CO_2 via microbial electrosynthesis
Eileen Yu *Newcastle University, UK*

16:00-16:20

OS I-2 Electroactive microorganisms from the saline-alkaline lake sediments
Sunil A. Patil *Indian Institute of Science Education and Research Mohali, India*

OS II-2 Less is more: a comprehensive study on the effect of the gas diffusion layer thickness in air-cathode MFCs performance
Pilar Sánchez Peña *Autonomous University of Barcelona, Spain*

16:20-16:40

OS I-3 Get salty with me: acetate production through homoacetogenesis in (hyper) saline conditions
Tyler Arbour *Center for Microbial Ecology and Technology (CMET) Gent, Belgium*

OS II-3 Bio-inspired synthesis of reduced graphene oxide wrapped *Geobacter sulfurreducens* as a novel hybrid electrocatalyst for efficient water splitting
Krishna P. Katuri *King Abdullah University of Science and Technology, Saudi Arabia*

16:40-17:00

OS I-4 Electricity production from long chain fatty acid using microbial fuel cells and its metabolism pathway
Rusen Zou *Technical University of Denmark, Denmark*

OS II-4 Copper-bottomed: electrochemically active bacteria exploit copper for enhanced electrogeneity.
Uwe Schröder *Braunschweig Institute of Technology, Germany*

17:00-17:20

OS I-5 Metatranscriptomic analysis reveals the response of electroactive biofilms to different temperatures
Defeng Xing *Harbin Institute of Technology, China*

OS II-5 Direct 3D-printing graphene anode achieving high power density for microbial fuel cell
Yuting He *Chongqing University, China*

17:20-17:40

OS I-6 Influences of cathode biofilm on the performance of scaling up membrane-free air-cathode microbial fuel cells
Chao-Chin, Chang *National Taiwan University, Taiwan*

OS II-6 A novel composite cathode made of copper foam coated with reduced graphene oxide for the microbial electrosynthesis of acetate from carbon dioxide
Pier-Luc Tremblay *Wuhan University of Technology, China*

October 8 (Tuesday)

9:00-9:40 Plenary Session

Auditorium

Keynote Lecture 2

Chair Person: Yuri Gorby *(Rensselaer Polytechnic Institute, USA)*

Speaker: Shunichi Ishii *(Japan Agency for Marine-Earth Science and Technology (JAMSTEC), Japan)*

Response to surface redox potential changes – Identification of EET mechanisms by using MetaOmics approach

9:50- 14:50 Oral Sessions

B250 Seminar Room

Session 3:
Fundamentals of extracellular electron transfer (EET)

Chair Person: Sarah Glaven

10:00-10:20

OSⅢ-1 Optically monitoring the ebb and flow of electrons across a biofilm/electrode interface
Leonard Tender *U.S. Naval Research Laboratory, USA*

10:20-10:40

OSⅢ-2 2-amino-3-carboxy-1,4-naphthoquinone, an elusive electron shuttle secreted by *Shewanella oneidensis* MR-1
Lin Su *Lawrence Berkeley National Laboratory, USA*

10:40-11:00

OSⅢ-3 In vivo-specific deca-heme rearrangement in bacterial surface cytochromes revealed by whole-cell circular dichroism difference spectroscopy
Yoshihide Tokunou *University of Tsukuba, Japan*

C210 Seminar Room

Session 4:
Bioremediation, wastewater treatment and nutrient recovery

Chair Person: Korneel Rabaey

OSⅣ-1 Biological conversion of sulfide into electricity
Annemiek ter Heijne *Wageningen University, Netherlands*

OSⅣ-2 *In-situ* biomass quantification reveals maximum activity of electroactive biofilms
Tom Sleutels *European Centre of Excellence for Sustainable Water Technology, Netherlands*

OSⅣ-3 Microbial Fuel Cells: A climate neutral technology for direct electricity production from crude oil
Arpita Nandy *University of Calgary, Canada*

11:10-11:30

OSⅢ-4 Gram positive bacteria do it differently? Molecular bases of extracellular electron transfer in the gram positive bacterium *Thermincola potens* JR
Ricardo O. Louro *NOVA University Lisbon, Portugal*

OSⅣ-4 Increasing the performance of soil bioelectrochemical systems by *in situ* formation of conductive reduced-graphene oxide
Bernardino Virdis *University of Queensland, Australia*

11:30-11:50

OSⅢ-5 Cytochrome c maturation system: the factory of extracellular electron transfer
Ana V. Silva *NOVA University Lisbon, Portugal*

OSⅣ-5 Enhanced scalable bioelectrochemical system for the biocathode denitrification using swine wastewater
Anna Prokhorova *Okinawa Institute of Science and Technology Graduate University, Japan*

11:50-12:10

OSⅢ-6 Extracellular electron transfer-dependent anaerobic oxidation of ammonium by anammox bacteria
Dario R. Shaw *King Abdullah University of Science and Technology, Saudi Arabia*

OSⅣ-6 High-rate sludge treatment through microbial peroxide-producing cells: a flux and rate analysis
Cesar I. Torres *Arizona State University, USA*

12:10-12:30

OSⅢ-7 Proteolytic maturation of the outer membrane c-type cytochrome OmcZ is essential for optimal current production by *Geobacter sulfurreducens*
Kengo Inoue *University of Miyazaki, Japan*

OSⅣ-7 The formation of electroactive biofilm from wastewater and its stability
Xin Wang *Nankai University, China*

LUNCH

Chair Person: Mirella Di Lorenzo

Chair Person: Stefano Freguia

13:30-13:50

OSⅢ-8 A novel mode of regulation for electrochemical activities of *Shewanella oneidensis* MR-1
Atsushi Kouzuma *Tokyo University of Pharmacy and Life Sciences, Japan*

OSⅣ-8 Long-term operation of plant microbial fuel cells for remediation of hexavalent chromium-contaminated soils
Chang-Ping Yu *National Taiwan University, Taiwan*

13:50-14:10

OSⅢ-9 Extracellular respiration of biochar by anaerobic methanotrophic archaea (ANME) for anaerobic oxidation of methane (AOM)
Xueqin Zhang *University of Queensland, Australia*

OSⅣ-9 Optimization of the operational parameters for comprehensive bioelectrochemical treatment of synthetic acid mine drainage
Mira Sulonen *Autonomous University of Barcelona, Spain*

14:10-14:30

OSⅢ-10 Microscopic and functional characterization of bacterial nanowires in *Shewanella oneidensis* MR-1
Grace W Chong *University of Southern California, USA*

OSⅣ-10 Effect of flush water on nutrient recovery from urine using bio-electroconcentration
Juliette Monetti *University of Queensland, Australia*

14:30-14:50

OSⅢ-11 Spotlight on the energy harvest of electroactive microorganisms: The impact of the applied anode potential
Benjamin Korth *Helmholtz-Centre for Environmental Research - UfZ, Germany*

OSⅣ-11 Electron flow rates in corrosion under co-existence of iron-corrosive methanogen and sulfate-reducing bacterium
Satoshi Wakai *Japan Agency for Marine-Earth Science and Technology (JAMSTEC), Japan*

15:10-15:50 Plenary Session

Auditorium

Keynote Lecture 3

Chair Person: Ricardo Louro *(NOVA University Lisbon, Portugal)*

Speaker: Ioannis Ieropoulos *(University of the West of England, UK)*

Microbial Fuel Cells and AI– A platform technology for autonomy, bioelectricity and environmental de-pollution

15:50- 16:10 Lightning Talks

Auditorium

Lightning talks 1

Chair Person: Ricardo Louro *(NOVA University Lisbon, Portugal)*

15:50-15:55

LT1-1 P I -4 Effect of HRT on nitrogen recovery from real reject water in a 3-chamber bioelectroconcentration cell
Veera Koskue *Tampere University, Finland*

15:55-16:00

LT1-2 P I -44 Development of hydrogel-based anion exchange membrane (AEM).
Peter Babiak *Biological Systems Unit, Okinawa Institute of Science and Technology, Japan*

16:00-16:05

LT1-3 P I -19 Simultaneous urine treatment and nutrient recovery with anodic electro-oxidation of hydrolyzed urine at low pH – avoiding nitrogen loss and perchlorate formation
Johannes Jermakka *Tampere University, Finland*

16:05-16:10

LT1-4 P I -29 Open source hardware for microbial electrochemistry research
Carlos Sanchez *National University of Ireland Galway, Ireland*

16:30-18:20 Poster Sessions

Conference Room

P I -1 Optimizing electroactive organisms: the effect of orthologous proteins
Catarina Paquete *Instituto de Tecnologia Química e Biológica António Xavier, Oeiras, Portugal*

P I -2 PANI modified gold sputtered flexible conducting paper as a novel exoelectrogenic biofilm platform for applications in biosensing
Rahul Kandpal *Indian Institute of Technology (IIT) Delhi, India*

P I -3 Biomineralization of electroactive Mn-oxides by the Mn(II) oxidizer *Pseudomonas putida*
Laura Galezowski *Institut de Minéralogie, Physique des Matériaux et Cosmochimie, CNRS UMR, France*

P I -4 Effect of HRT on nitrogen recovery from real reject water in a 3-chamber bioelectroconcentration cell
Veera Koskue *Tampere University, Finland*

P I -5 Functionality and characterization of redox active extracellular vesicles
Lori Zacharoff *University of Southern California, Department of Physics and Astronomy, Los Angeles, CA, USA*

P I -6 SO_1646 encodes a diguanylate cyclase that determines intracellular cyclic di-GMP levels and regulates biofilm formation and current generation by *Shewanella oneidensis* MR-1
Akiho Matsumoto *Tokyo University of Pharmacy and Life Sciences, Tokyo, Japan*

P I -7 Extracellular electron transport by human gut bacteria: electrochemical techniques for isolation and characterization
Waheed Miran *International Center for Materials Nanoarchitectonics (WPI-MANA), National Institute for Materials Science, Tsukuba, Japan*

P I -8 Reproducible Polarization Test Method and Fair Evaluation of Electrochemical Polarization Data by using Interconversion Factors in a Single Chamber Microbial Fuel Cell
Sunghoon Son *Department of Environment and Energy Engineering, Chonnam National University, Gwangju, Korea*

P I -9 Evaluating the electricity-generation potential of *Shewanella* spp. by using Monod-Nernst kinetic model and Raman spectroscopy
Shiue-Lin Li *Department of Environmental Science and Engineering, Tunghai University, Tiwan*

P I -10 Microbial stratification structure within anode biofilm in microbial bioelectrochemical system treating brewery wastewater
Zhuang Li *School of Environment, Jinan University, Guangzhou, China*

P I -11 Circular dichroism spectroscopy for engineered *E.coli* surface cytochrome detection
Xizi Long *School of Energy and Environment, Southeast University, Nanjing 210096, China.*

P I -12 Understanding the exoelectrogenic activity of photosynthetic microorganisms
Aazraa Oumayyah Pankan *University of Cambridge, UK*

P I -13 Genomic and transcriptomic analysis of *Geobacter sulfurreducens* YM18 capable of producing high current density
Takashi Fujikawa *Department of Biochemistry and Applied Biosciences, Faculty of Agriculture, University of Miyazaki, Miyazaki, Japan*

P I -14 Modification of stainless steel by carbon black/phenol formaldehyde coating for high-performance anode in microbial fuel cells
Minhua Jiang *Jiangxi Normal University, China*

P I -15 Bio-electrochemical treatment of phenol wastewater
Kaho Yamada *Nippon Steel Corporation, Chiba, Japan*

P I -16 Dynamic shifts in microbial ecology of urine powered un-inoculated microbial fuel cells.
Oluwatosin Obata *Bristol BioEnergy Centre, Bristol Robotics Laboratory, University of the West of England, UK*

P I -18 Feedback against glucose shock enhances performance of autotrophic biocathode
Chengmei Liao *MOE Key Laboratory of Pollution Processes and Environmental Criteria, China*

P I -19 Simultaneous urine treatment and nutrient recovery with anodic electro-oxidation of hydrolyzed urine at low pH – avoiding nitrogen loss and perchlorate formation
Johannes Jermakka *Tampere University, Finland*

P I -20 Biological C1 gas conversion in bioelectrochemical system with considering proton and electron migration
Young Eun Song *School of Chemical and Biomolecular Engineering, Pusan National University, Busan, Korea*

P I -21 Effect of different redox mediators on microbial electrosynthesis of CO_2 to acetate in bioelectrochemical system
Shuwei Li *School of Chemical and Biomolecular Engineering, Pusan National University, Korea*

P I -22 Electro-fermentation of 1,3-PDO from crude glycerol using *Klebsiella pneumoniae* L17 in bioelectrochemial system
Da Seul Kong *School ofChemical and Biomolecular Engineering, Pusan National University, Busan, Korea*

P I -23 Optimization of operational parameters using response surface methodology (RSM) to enhance the performance of photosynthetic microbial fuel cell (PMFC) and biofuel feed stock production
Jagdeep Kumar Nayak *Department of Polymer and Process Engineering, Indian Institute of Technology Roorkee, India*

P I -24 Developing a biohybrid electron-transfer chain for solar-powered reductive chemistry
Sam Piper *School ofChemistryand School of Biological Sciences, University of East Anglia, Norwich ResearchPark, Norwich, UK*

P I -25 Electrode potential regulated phenol degradation pathways in micro-oxygen microbial electrochemical systems
Lean Zhou *MOE Key Laboratory of Pollution Processes and Environmental Criteria, China*

P I -26 Bio-Electrochemical studies for harvesting carbon dioxide to organic compounds
Robina Farooq *Department of Chemistry Engineering, COMSATS University Islamabad, Lahore campus, Pakistan*

P I -27 Metal uptake in *Shewanella*: exploring the mechanisms of siderophore recycling
Inês de Brito Trindade *NOVA Universitiy Lisbon, Portugal*

P I -28 Removal of hexavalent chromium in dual-chamber microbial fuel cells separated by different ion exchange membranes
Heming Wang *State Key Laboratory of Heavy Oil Processing, Beijing Key Lab of Oil & Gas Pollution Control, China University of Petroleum-Beijing, Beijing, China*

P I -29 Open source hardware for microbial electrochemistry research
Carlos Sanchez *National University of Ireland Galway, Ireland*

P I -30 Nitrogen removal performance and pathway in flat-type single-chamber MFCs
Jaecheul Yu *Department of Civil and Environmental Engineering, Pusan National University, Busan, South Korea*

P I -31 The refractory organic degradation by a stacked microbial fuel cell-biofilm electrode reactor coupled system and characterization of microbial community
Xian Cao *Department of Civil and Environmental Engineering, Graduate School of Engineering, Tohoku University, Japan*

P I -32 Antibiotic resistance genes and mobile genetic elements in the dewatered sludge of bioelectrochemically-assisted anaerobic composting with addition of calcium peroxide
Hang Yu *Institute of Environmental Remediation Dalian Maritime University, Dalian, China*

P I -34 On-site winery wastewater treatment using bioelectrochemical systems
Mami Kainuma *Biological Systems Unit, Okinawa Institute of Science and Technology, Japan*

P I -35 Sediment microbial fuel cells (SMFC) applied for suppression of P release from the lake sediment
Yasuyuki Takemura *National Institute for Environmental Studies, Center for Regional Environmental Research, Tsukuba, Ibaraki Japan*

P I -37 Polyaniline and polypyrrole modified carbon cloth anode for generation of bio-energy and waste water treatment
Praveena Mishra *Jiwaji University Gwalior, Madhya, Pradesh, India*

P I -38 A bioelectrochemical system-based biosensor for monitoring biochemical oxygen demand (BOD) of wastewater in an aeration tank
Hiroshi Yokoyama *Institute of Livestock and Grassland Science, National Agriculture and Food Research Organization (NARO), Tsukuba, Ibaraki, Japan*

P I -40 Molybdenum anode for enhanced power generation in microbial fuel cells, identified via extensive screening of metal electrodes
Takahiro Yamashita *Institute of Livestock and Grassland Science, National Agriculture and Food Research Organization (NARO), Tsukuba, Ibaraki, Japan*

P I -42 Selection of an efficient anode material and treatment of thermomechanical pulping wastewater in an up-flow microbial fuel cell
Paolo Dessi *Tampere University, Faculty of Engineering and Natural Sciences, Tampere University, Finland*

P I -43 Improved performance of anode electrode by microwave-based expanded granule microbial fuel cell
Minsoo Kim *School of Chemical and Biomolecular Engineering, Pusan National University, Busan, Korea*

P I-44 Development of hydrogel-based anion exchange membrane (AEM).
Peter Babiak *Biological Systems Unit, Okinawa Institute of Science and Technology, Japan*

P I-46 Graphene-Interface with Electrogenic Bacterial Membrane for Electron-Harvestation
Sheldon Cotts *Department of Chemical Engineering, University of Illinois at Chicago, USA*

P I-47 Pilot scale submerged ultrafiltration membrane bio-fuel cell with transverse vibration technique to mitigate membrane biofouling with enhanced power production
Gourav Dhar Bhowmick *Department of Agricultural and Food Engineering, Indian Institute of Technology, Kharagpur, India*

P I-48 An efficient and longevous biophotovoltaics based on a defined microbial consortium with constrained electron flow
Huawei Zhu *CAS Key Laboratory of Microbial Physiological and Metabolic Engineering, State Key Laboratory of Microbial Resources, Institute of Microbiology, Chinese Academy of Sciences, Beijing, China*

P I-49 Bacteria-electrode interaction in bioproduction: small current, large production
Changman Kim *Lawrence Berkeley National Laboratory | LBL · Biological Systems & Engineering*

P I-50 Effects of magnetite and external voltage on biomethanation of dairy wastewater
Jinsu Kim *School of Urban and Environmental Engineering, Ulsan National Institute of Science and Technology, Korea*

P I-51 Zero valent iron (ZVI) enhanced acetate and VFA production from carbon monoxide using *Fonticella tunisiensis* HN43
Hyeonsung Im *School of Chemical and Biomolecular Engineering, Pusan National University, Busan, Republic of Korea*

P I-52 Improving electrode-assisted fermentation of platform chemicals in *Escherichia coli*
Laura-Alina Philipp *Karlsruhe Institute of Technology, Institute for Applied Biosciences - Applied Biology, Karlsruhe, Germany*

P I-55 Anode electrode facilitates acetate oxidation and electrical energy recovery by using *Pseudomonas putida 2523*
Mutyala Sakuntala *School of Chemical and Biomolecular Engineering, Pusan National University, Busan, Republic of Korea*

P I-56 Changes of nutrient in sediment pore water by sediment microbial fuel cell and evaluation of these influence range around anode
Keiichi Kubota *Division of Environmental Engineering Science, Gunma University, Japan*

P I-58 Development and testing of a bio-electrochemical sensor for organic load measurement in sewage treatment
Richard Dinsdale *Sustainable Environment Research Centre (SERC), University of South Wales, Pontypridd, UK*

P I-59 Stratified chemical and microbial characteristics between anode and cathode in plant Microbial Fuel Cells for remediation of hexavalent chromium contaminated soils in long-term operation
Chung-Yu Guan *Graduate Institute of Environmental Engineering, National Taiwan University*

P I-60 Reductive/oxidative bioelectrochemical process for the treatment of CAHs contaminated groundwater
Marco Zeppilli *Department of Chemistry "Sapienza" University of Rome, Roma, Italy*

October 9 (Wednesday)

9:00-9:40 Plenary Session

Auditorium

Keynote Lecture 4

Chair Person: Chang-Ping Yu *(Graduate Institute of Environmental Engineering, National Taiwan University, Taiwan)*

Speaker: Stefano Freguia *(University of Queensland, Australia)*

Making fertilizers from human urine using microbial electrochemistry: from exotic biofilms to business opportunities

9:50- 14:50 Oral Sessions

B250 Seminar Room

Session 5:
Bioelectrochemical systems: application towards commercialization

Chair Person: Annemiek Ter Heijne

10:00-10:20

OSV-1 EvoBot in service: interface and interconnection of Microbial Fuel Cells (MFCs) with a liquid handling robot for optimised performance
Pavlina Theodosiou *University of the West of England, UK*

10:20-10:40

OSV-2 Power to C-neutral compounds – Electro bioCO_2 recycling to acetate under thermophilic conditions
Laura Rovira Alsina *University of Girona, Spain*

10:40-11:00

OSV-3 High-throughput screening and selection of electrogenic microbial communities using single chamber microbial fuel cells based on 96-well plate array.
Lukasz Szydlowski *Okinawa Institute of Science and Technology Graduate University, Japan*

C210 Seminar Room

Session 6:
Bioelectrosynthesis and electrotrophic microbes

Chair Person: Eileen Yu

OSVI-1 Scaled up, high rate production and extraction of volatile fatty acids from CO_2 and electricity
Korneel Rabaey *Ghent University, Belgium*

OSVI-2 Impact of CO_2 delivery method on the performance and microbial community in microbial electrosynthesis
Bin Bian *King Abdullah University of Science and Technology, Saudi Arabia*

OSVI-3 CO_2 electrobiorefinery: linking bioelectrochemical CO_2 reduction with renewable energy
Deepak Pant *Flemish Institute for Technological Research (VITO), Belgium*

Erratum

PI-33 Development of bioelectrochemical system for soil/groundwater oil remediation

Marsel Murzabaev *Biological Systems Unit, Okinawa Institute of Science and Technology, Japan*

11:10-11:30

OSV-4 Effect of external resistance on the efficiency of desalination, sewage treatment and power recovery in open air-cathode microbial desalination cell
Abdullah AI-Mamun *Sultan Qaboos University, Oman*

OSVI-4 Electrobiorefineries: merging electroorganic with microbial synthesis for production of chemicals
Falk Harnisch *Helmholtz-Centre for Environmental Research - UfZ, Germany*

11:30-11:50

OSV-5 Monod, Michaelis-Menten, Nernst or Butler-Volmer? Macroscopic microbial bioelectrochemical electron transfer kinetics and thermodynamics.
Robert Keith Brown *Braunschweig Institute of Technology, Germany*

OSVI-5 Resting but productive: *Escherichia coli* cells as chassis for microbial electrosynthesis of chiral alcohols
Jeannine Mayr *Braunschweig Institute of Technology, Germany*

11:50-12:10

OSV-6 Scale-up of tubular plant-microbial fuel cells in a peat marshland and a sandy field in the Netherlands
Pim de Jager *Wageningen University, Netherlands*

OSVI-6 Anodic electro-fermentation: A tool to enhance the anoxic capability of microorganisms and redirect the metabolic carbon flow towards products of interest
Igor Vassilev *Tampere University, Finland*

12:10-12:30

OSV-7 Modification of carbon cloth with highly biocompatible PEDOT/GO films for promoting the cathode performance of CO_2 reduction to CH_4
Qian Fu *Chongqing University, China*

OSVI-7 Strategies for increasing multi-carbon bio-products from CO_2 by microbial electrosynthesis (MES)
Paniz Izadi *Newcastle University, UK*

LUNCH

Chair Person: Cesar Torres

Chair Person: Uwe Schröder

13:30-13:50

OSV-8 Linking internal resistance with design and operation of a scale-up microbial electrolysis cell
Hong Liu *Oregon State University, USA*

OSVI-8 Powering the metabolism of *Cupriavidus necator* with inorganic photocatalysts for the production of polyhydroxybutyrate
Tian Zhang *Wuhan University of Technology, China*

13:50-14:10

OSV-9 Operation of field scale 720 L stacked microbial fuel cell treating human excreta with surrounding illumination: a case study
Makarand Ghangrekar *Indian Institute of Technology Kharagpur, India*

OSVI-9 Enhanced selectivity to butyrate and caproate above acetate in high-rate continuous microbial electrosynthesis from CO_2
Ludovic Jourdin *Wageningen University, Netherlands*

14:10-14:30

OSV-10 A novel framework for BES modelling: integrating individual-based models for biofilm description
Albert Guisasola *Autonomous University of Barcelona, Spain*

OSVI-10 Anaerobic granular sludge as biocathode for electromethanogenesis
Huihui Zhou *Technical University of Denmark, Denmark*

14:30-14:50

OSV-11 Platform chemical productions by metabolic pathway regulation and bioelectrochemical interaction between bacteria and electrode
Jung Rae Kim *Pusan National University, Korea*

OSVI-11 Bioelectrochemical production of caproic acid with electrodialysis batch extraction
Paula Andrea Hernandez *University of Queensland, Australia*

15:10-15:50 Plenary Session

Auditorium

Keynote Lecture 5

Chair Person: Ioannis Ieropoulos *(University of the West of England, UK)*

Speaker: Mirella Di Lorenzo *(University of Bath, UK)*

Low-cost and easy-to-scale-up microbial fuel cells for energy harvesting and sensing applications

15:50- 16:10 Lightning Talks

Auditorium

Lightning talks 2

Chair Person: Ioannis Ieropoulos*(University of the West of England, UK)*

15:50-15:55

LT2-1 PII-30 Riboflavin induced *Shewanella oneidensis* biofilm formation in bioelectrochemical systems
Miriam Edel *Karlsruhe Institute of Technology, Germany*

15:55-16:00

LT2-2 PII-38 A bioelectrochemical sensor for the detection of circulating tumor DNA in the bloodstream.
Xidong Yang *Wuhan University of Technology, China*

16:00-16:05

LT2-3 PII-22 Physiology of electrosynthetic microorganisms at increasing current densities
Frauke Kracke *Department of Civil & Environmental Engineering, Stanford University, Stanford, California, USA*

16:05-16:10

LT2-4 PII-39 Long-term operation of a pilot scale Bio-Electrochemical System treating awamori distillery wastewater
David Simpson *Biological Systems Unit, Okinawa Institute of Science and Technology, Japan*

16:10-18:00 Poster Sessions

Conference Room

PⅡ-1 Raman as a tool for characterization of the kinetics of cytochrome reduction in a microbial fuel cell
Adolf Krige *BiochemicalProcess Engineering, Division of Chemical Engineering, Department of Civil, Environmental and Natural Resources Engineering, Luleå University of Technology, Luleå, Sweden*

PⅡ-2 3D bio-printing microbial electrosynthesis biofilms
Paul Christakopoulos *Biochemical Process Engineering, Division of Chemical Engineering, Department of Civil, Environmental and Natural Resources Engineering, Luleå University of Technology, Luleå, Sweden*

PⅡ-3 Humin, insoluble humic substances, as the external electron donor for multiple microbial reducing reactions
Arata Katayama *Institute of Materials and Systems for Sustainability, Nagoya University, Japan*

PⅡ-4 Genomic engineering of *Methanosarcina acetivorans* to convert methane to electricity
Norman Adlung *School of Chemical Engineering, Aalto University, Finland*

PⅡ-5 Effect of cell morphology on extracellular electron transport in cyanobacteria
Tonny Okedi *Department of Chemical Engineering and Biotechnology, University of Cambridge, UK*

PⅡ-6 Humin functions as the electron donor in reductive acetogensis
Mahasweta Laskar *Graduate School of engineering, Nagoya University, Japan*

PⅡ-7 Low extracellular electron transport facilitate fermentative metabolism in oral pathogen: possibility of electrical symbiosis in oral plaque
Divya Naradasu *Department of Advanced Interdisciplinary Studies, Rcast, Graduate School of Engineering, The University of Tokyo, Japan.*

PⅡ-8 *Shewanella oneidensis* MR-1 catalyzes the oxidation of metallic iron: a novel microbiologically-influenced corrosion mechanism
M. Alejandra Hernandez-Santana *School of Civil Engineering and Environmental Science, University of Oklahoma, USA*

PⅡ-9 Analysis of the protein complement involved in cable bacteria electron transport
Thomas Boesen *Center for Electromicrobiology, Department of Molecular Biology and Genetics, Aarhus University, Aarhus C, Denmark*

PⅡ-10 Synergetic current generation across conductive bacterial networks in biomineralized coculture
Murugan Muralidharan *International Center for Materials Nanoarchitectonics (WPI-MANA), National Institute for Materials Science (NIMS), Tsukuba, Ibaraki, Japan*

PⅡ-11 The role of a Shewanella oneidensis MtrC disulfide bond in controlling electron transfer.
Tom Clarke *School of Biological Sciences, University of East Anglia,UK*

PⅡ-12 Characterization of the inward electron conduits that facilitate microbial electron uptake from cathodes
Sara Tejedor-Sanz *Molecular Foundry, Lawrence Berkeley National Laboratory, Berkeley, CA, USA*

PⅡ-13 Start-up strategies for electrochemical reduction of CO_2 using bacterial monocultures
Pawel Piatek *Division of Industrial Biotechnology, Chalmers University of Technology, Sweden*

PⅡ-14 Differential proliferation of bacterial species under varying poised potentials and its functional implications in bio-electrochemical denitrification
Daqian Jiang *Department of Environmental Engineering, Montana Tech, USA*

PⅡ-15 On-site enrichment of electroactive microbes in marine environments with polarized conductive surfaces
Hiroyuki Kashima *Japan Agency for Marine-Earth Science & Technology (JAMSTEC), Japan*

PⅡ-16 Impact of the inoculation regime on the microbial ecology of urine-fed ceramic-based microbial fuel cells.
Maria Jose Salar Garcia *Bristol BioEnergyCentre, Bristol Robotics Laboratory, University of the West of England, UK*

PⅡ-17 Bioelectrical systems and pathogenes
Olga Vasieva *University of Liverpool, Liverpool and Ingenet Ltd, London, UK*

PⅡ-18 Promotion of biological nitrogen fixation with solid-phase humin
Takuya Kasai *Institute of materials and systems for sustainability, Nagoya University, Japan*

PⅡ-21 Expanding the list of syntrophic DIET co-cultures
Mon Oo Yee *Nordcee, Department of Biology, University of Southern Denmark, Odense, Denmark*

PⅡ-22 Physiology of electrosynthetic microorganisms at increasing current densities
Frauke Kracke *Department of Civil & Environmental Engineering, Stanford University, Stanford, California, USA*

PⅡ-25 Resorcinol as a highly efficient aromatic electron donor in bioelectrochemical system
Hao-Yi Cheng *Laboratory of Environmental Biotechnology, Research Center for Eco-Environmental Sciences, Chinese Academy of Sciences, Beijing, China*

PⅡ-26 Enhancement of bioconversion in anaerobic microbial ecosystem via biogeneic mineral
Kazuki Yasuike *Department of Applied Chemistry and Biochemical Engineering, Graduate School of Engineering, Shizuoka University, Hamamatsu, Japan*

PⅡ-27 Humin as an insoluble external electron mediator in microbial reductive reactions: electrochemical characterization of humin extracted from different soil sources
Duyen Minh Pham *Institute of Materials and Systems for Sustainability, Nagoya University, Japan*

PⅡ-29 Microbial concentration cells for urine-rich space wastewater treatment and resource recovery without external energy consumption
Sidan Lu *Department of Civil and Environmental Engineering, Louisiana State University, Baton Rouge, LA, USA*

PⅡ-30 Riboflavin induced *Shewanella oneidensis* biofilm formation in bioelectrochemical systems
Miriam Edel *Karlsruhe Institute of Technology, Germany*

PⅡ-31 Self-sustaining in situ nutrients removal from eutrophic water using a submerged photomicrobial nutrients recovery cell (SPNRC)
Qing Jiang *State Key Laboratory of Urban Water Resource and Environment, School of Environment, Harbin Institute of Technology, China*

PⅡ-33 Simultaneous arsenic mitigation and electricity production in paddy soils by using microbial fuel cells
Zheng Chen *Department of Health and Environmental Sciences, Xi'an Jiaotong-Liverpool University, Suzhou, Jiangsu, China*

PⅡ-34 A biorefinery concept for food waste using a microbial electrolysis cell
Daniel Härrer *Karlsruhe Institute of Technology, Institute for Applied Biosciences-Applied Biology, Karlsruhe, Germany*

PⅡ-35 Mitigation effect of a microporous sheet with pre-enriched nitrifying biofilm on long-term deterioration in TN removal and power generation in a single-chamber MFC
Tomohide Watanabe *Division of Environmental Engineering Science, Gunma University, Japan*

PⅡ-36 On-site evaluation of electricity recovery from sewage wastewater by tuber microbial fuel cells
Naoko Yoshida *Nagoya Institute of Technology, Japan*

PⅡ-37 The optimization strategies of microbial fuel cell based biosensors and the underlying biological mechanisms
Hong Liu, Beizhen Xie and Yue Yi *Beijing Advanced Innovation Center for Biomedical Engineering, BeihangUniversity, Beijing, China*

PⅡ-38 A bioelectrochemical sensor for the detection of circulating tumor DNA in the bloodstream.
Xidong Yang *Wuhan University of Technology, China*

PⅡ-39 Long-term operation of a pilot scale bio-electrochemical system treating awamori distillery wastewater
David Simpson *Biological Systems Unit, Okinawa Institute of Science and Technology, Japan*

PⅡ-41 Production of conductive bacterial cellulose as a versatile material for bioelectrochemical applications
Ran Ding *School of Chemistry, Chemical Engineering and Life Science, Wuhan University ofTechnology, Wuhan, PR China*

PⅡ-42 Performance and electrochemistry of a microbial fuel cell by using activated carbon cathodes with reduced graphene oxide
Bonyoung Koo *Department of Environment and Energy Engineering, Chonnam National University, Gwangju, South Korea*

PⅡ-43 Effects of structures and arrangements of anode and cathode electrodes on performance and electrochemistry of microbial fuel cells
Sokhee P. Jung *Department of Environment and Energy Engineering, Chonnam National University, Gwangju, South Korea*

PⅡ-44 Polymer derived ceramic based Co/Ni-SiOC (N) electrocatalyst to improve the performance of microbial fuel cell
Ishita Ramkrishna Lade *Department of Civil Engineering, Indian Institute of Technology Kharagpur, India*

PⅡ-45 Power generation in a MFC with an air cathode fabricated under different preparation condition for a catalytic layer using a nitrogen-doped activated carbon catalyst
Kouhei Narizuka *Division of Environmental Engineering Science, Gunma University, Japan*

PⅡ-46 Simulation of bioelectrochemical systems: approaches and complexity
Jordan Day *School of Civil Engineering, Newcastle University, UK*

PⅡ-48 Microbial anodes for CO_2 recovery in regenerative life support systems
Amanda K. Luther *Center for Microbial Ecology and Technology (CMET), Ghent University, Gent, Belgium*

PⅡ-49 Uneven biofilm formation and current distribution in three-dimensional copper microelectrode array
Jun Li *Key Laboratory of Low-grade Energy Utilization Technologies and Systems, Chongqing University, Ministry of Education, Chongqing, China*

PⅡ-50 Improvement of power production from sewage by microbial fuel cells
Kayako Hirooka *Gifu University | Gidai · River Basin Research Center, Japan*

PⅡ-51 Enhancing carbon and nitrogen removals from surface water by bio-electrochemical system with submerged plants
Qiu Ye *Harbin Institute of Technology, State Key Laboratory of Urban Water Resource and Environment, China*

PⅡ-53 Enhanced hydrogen production from hydrogen fermentation effluent in single-chamber cylindrical microbial electrolysis cell
Xiaohu Li *School of Space and Environment, Beihang University, Beijing 100191, PR China*

PⅡ-54 Evaluating the financial viability of MECs against the current predominant method of wastewater treatment
Elizabeth Heidrich *Newcastle University, UK*

PⅡ-56 Performances of a tubular MEC aimed to biogas upgrading under anodic and cathodic potentiostatic control
Marco Zeppilli *Departement of Chemistry "Sapienza" University of Rome, Roma, Italy*

PⅡ-58 Characterisation of gram-positive hydrogen oxidizing bacterial species for electrosynthesis of added-value compounds from carbon dioxide
Michael Lienemann *VTT Technical Research Centre of Finland Ltd, Espoo, Finland*

PⅡ-59 Critical parameters selection in polarization behavior analysis of microbial fuel cells
Wenjuan Zhao *Jiangxi Normal University, China*

PⅡ-61 Evaluation of anode surface modification for enhanced extracellular electron transfer (ETT) of *Shewanella oneidensis* MR-1 in microbial fuel cell in presence of different substrates
Silvia Sato Soto *Division of Materials Science, Faculty of Pure and Applied Science, University of Tsukuba, Ibaraki, Japan*

Erratum

PII-19 **Luis Alberto Macías Pérez** *Aix-Marseille Université – CEREGE, France*

PII-20 *In-situ* lake remediation using sediment microbial fuel cells: a pilot study
Karl Haxthausen, *Institute for Environmental Engineering, Technical University of Denmark, Demark*

PII-23 Conductivity Oscillations in bacterial suspensions triggered by Electrochemical Stimulation
F. Hirschberg, A. Eckert, H.-H. Johannes, W. Kowalsky, *Technische Universitaet Braunschweig,Germany*

October 10 (Thursday)

9:00-9:40 Plenary Session

Auditorium

Keynote Lecture 6

Chair Person: Hong Liu *(Beijing Advanced Innovation Center for Biomedical Engineering, Beihang University, China)*

Speaker: Sebastia Puig *(University of Girona, Spain)*

Niches for electro bioremediation of contaminated waters

9:50- 10:50 Oral Sessions

B250 Seminar Room

Session 3:
Fundamentals of extracellular electron transfer (EET)

Chair Person: Leonard Tender

10:00-10:20

OSⅢ-12 Electrochemical and phylogenetic comparisons of oxygen-reducing electroautotrophic communities
Antonin Prévoteau *Ghent University, Belgium*

10:20-10:40

OSⅢ-13 Crystal structure of a bacterial outer membrane electron conduit
Marcus Edwards *University of East Anglia, UK*

10:40-11:00

OSⅢ-14 Behaviour of *Geobacter sulfurreducens* upon exposure to oxygen
Katrin Dohnt *Braunschweig Institute of Technology, Germany*

C210 Seminar Room

Session 6:
Bioelectrosynthesis and electrotrophic microbes

Chair Person: Shunichi Ishii

OSⅥ-12 Bioelectrochemical production of ammonia using an engineered iron-oxidizing bacterium
Shohei Yamada *Tokyo University of Pharmacy and Life Sciences, Japan*

OSⅥ-13 Towards a thermoacidophilic polyhydroxyalkanoates production using a cathodic biofilm
Johannes Eberhard Reiner *Karlsruhe Institute of Technology, Germany*

OSⅥ-14 Electrogenic sulfur oxidation within the sediment burrow linings of an endangered mud shrimp
Cheng Li *Oregon State University, USA*

11:10-11:50 Plenary Session

Auditorium

Keynote Lecture 7

Chair Person: Falk Harnisch *(Helmholtz Centre for Environmental Research GmbH-UFZ, Germany)*

Speaker: Yuri Gorby *(Rensselaer Polytechnic Institute, USA)*

The past, present, and future of bioelectrical systems

11:50-12:30 Closing Ceremony

Auditorium

Closing Ceremony

Chair Person: Igor Goryanin *(Professor, Biological Systems Unit, OIST)*

Closing Remarks: Annemik Ter Heijne *(new President of International Society for Microbial Electrochemistry and Technology)*

Best Oral and Poster Presentation Award Ceremony

Social Programs

Welcome Reception

October 7 (Mon.) Doors Open at 18:00

18:00 – 21:00 Grano Restaurant

OIST Central Building Level B (near B250)

Banquet

October 9 (Wed.) Doors Open at 19:00

19:00 – 21:00 Rizzan Sea-Park Hotel Tancha-Bay,

Banquet Hall ‘’Rizzan’’

Address: 1496 Tancha, Onna Village, Kunigami, Okinawa /Phone: 098-964-6611

Participants are welcome to attend the banquet on October 9th at 19:00 at the Rizzan Sea-Park Hotel Tancha-Bay. Please make sure to bring the banquet coupon. A Shuttle bus service from OIST to the banquet venue will be available.

ISMET7 Free Shuttle Bus Schedule

Monday, October 7

● Official Designated Hotels to OIST

	OIST Seaside House	OIST
1	10:30	10:35

	Onna Marineview Palace	Hotel Monterey Okinawa	Rizzan Sea-Park Hotel	OIST
1	8:10	8:20	8:30	8:35

	Hotel Moon Beach	Rizzan Sea-Park Hotel	OIST
2	8:20	8:30	8:40

	Onna Marineview Palace	Rizzan Sea-Park Hotel	OIST
3	8:25	8:35	8:40

	Rizzan Sea-Park Hotel	OIST
4	8:45	8:50

	Hotel Moon Beach	Rizzan Sea-Park Hotel	OIST
5	9:10	9:20	9:30

● OIST to Official Designated Hotels

	OIST	OIST Seaside House
1	21:00	21:10

	OIST	Designated Hotels
1	21:00	To be determined

	OIST	Designated Hotels
2	21:10	To be determined

After the reception at OIST, the first bus leaves at 21:00 (tentative).
The bus departure time and the route are subject to change depending on the reception ending time, the number of participants and their staying hotels who uses the bus.

Tuesday, October 8

● Official Designated Hotels to OIST

	OIST Seaside House	OIST
1	7:45	7:50

	Onna Marineview Palace	Hotel Monterey Okinawa	Rizzan Sea-Park Hotel	OIST
1	8:10	8:20	8:30	8:35

	Hotel Moon Beach	Rizzan Sea-Park Hotel	OIST
2	8:20	8:30	8:40

	Onna Marineview Palace	Rizzan Sea-Park Hotel	OIST
3	8:25	8:35	8:40

	Rizzan Sea-Park Hotel	OIST
4	8:45	8:50

● OIST to Official Designated Hotels

	OIST	OIST Seaside House
1	18:15	18:20

	OIST	Designated Hotels
2	18:15~45	To be determined

The bus departure time and the route are subject to change depending on the conference ending time, the number of participants and their staying hotels who uses the bus.

Wednesday, October 9

● Official Designated Hotels to OIST

	OIST Seaside House	OIST
1	7:45	7:50

	Onna Marineview Palace	Hotel Monterey Okinawa	Rizzan Sea-Park Hotel	OIST
2	8:10	8:20	8:30	8:35
	Hotel Moon Beach	Rizzan Sea-Park Hotel	OIST	
3	8:20	8:30	8:40	
	Onna Marineview Palace	Rizzan Sea-Park Hotel	OIST	
4	8:25	8:35	8:40	
	Rizzan Sea-Park Hotel	OIST		
5	8:45	8:50		

● OIST to Official Designated Hotels

	OIST	Rizzan Sea-Park Hotel
1	18:00~18:30	18:15~18:40

	OIST	Rizzan Sea-Park Hotel
2	To be determined	

	Rizzan Sea-Park Hotel	Designated Hotels
1	21:30	21:35~
	Rizzan Sea-Park Hotel	Designated Hotels
2	To be determined	

Thursday, October 10

● Official Designated Hotels to OIST

	OIST Seaside House	OIST
1	7:45	7:50

	Onna Marineview Palace	Hotel Monterey Okinawa	Rizzan Sea-Park Hotel	OIST
2	8:10	8:20	8:30	8:35
	Hotel Moon Beach	Rizzan Sea-Park Hotel	OIST	
3	8:20	8:30	8:40	
	Onna Marineview Palace	Rizzan Sea-Park Hotel	OIST	
4	8:25	8:35	8:40	
	Rizzan Sea-Park Hotel	OIST		
5	8:45	8:50		

● OIST to Official Designated Hotels

	OIST	Designated Hotels
1	12:20	12:30

	OIST	OIST Seaside House
2	13:30	13:40

To Naha Airport

Thursday, October 10

● OIST to Naha Airport

OIST	Naha Airport
12:30	13:50

Friday, October 11

● Official Designated Hotels to Naha Airport

Rizzan Sea-Park Hotel	Hotel Monterey Okinawa	Onna Marineview Palace	Hotel Moon Beach	Naha Airport
5:20	5:30	5:35	5:40	6:30

Saturday, October 12

● OIST Seaside House to Naha Airport

OIST Seaside House	Naha Airport
5:30	6:30

*Please note that departure and arrival times may vary depending on progress of the program. The arrival time may be delayed due to weather and road conditions.