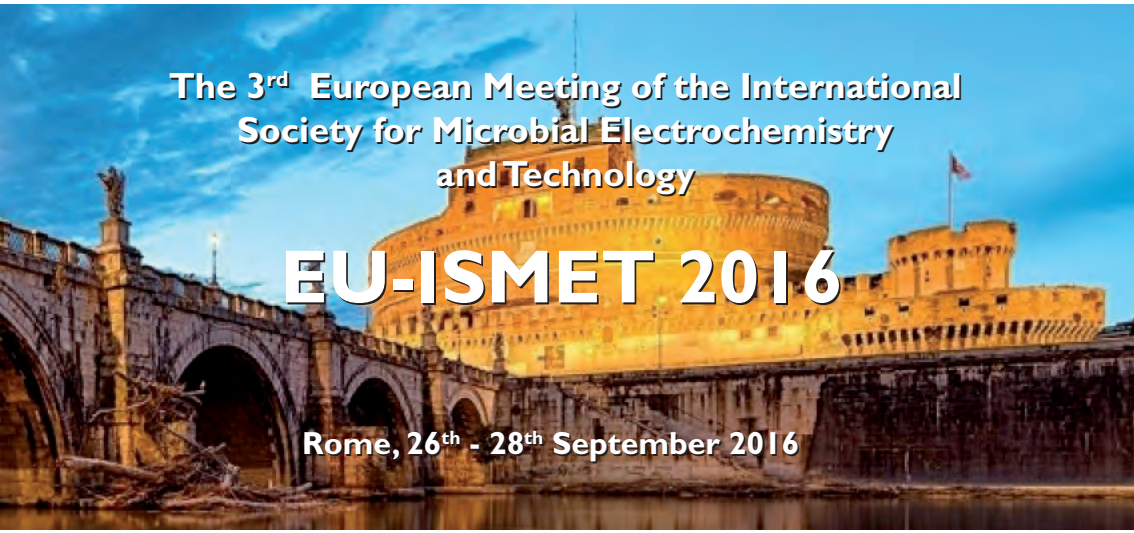
FINAL PROGRAM



The 3rd European Meeting of the International Society for Microbial Electrochemistry and Technology

EU-ISMET 2016

Rome, 26th - 28th September 2016

Conference co-chairs

Dr. Federico Aulenta *(IRSA-CNR)*

Prof. Mauro Majone *(Sapienza University of Rome)*

Venue

Department of Chemistry (NEC)

Sapienza University of Rome

Piazzale Aldo Moro 5, 00185 Rome, Italy

Preface

The tradition of the successful European Meetings of the International Society for Microbial Electrochemistry and Technology (ISMET, www.is-met.org) continues! The 3rd EU-ISMET meeting (EU-ISMET 2016) takes place in Rome, Italy from September 26 to 28, 2016. The Water Research Institute (IRSA) of the National Research Council (CNR) and the Department of Chemistry of Sapienza University of Rome organize the meeting jointly.

EU-ISMET 2016 aims to gather scientists from multiple disciplines (from microbiology to electrochemical engineering) to exchange information, experience and achievements in the rapidly expanding field of microbial electrochemical technologies (METs), as well as to tackle the daunting scientific challenges these new and exciting technologies still pose. Along this line, besides presenting and discussing on fundamental and applied science, for the first time, the meeting hosts a special session entirely dedicated to the presentation of results of "up-scaled applications". Hopefully, the success stories herein presented and critically discussed will catalyze the interest of stakeholders and potential end-users and will contribute driving the transition of MET from the laboratories to marketable applications. We are grateful to the International Scientific Committee that has contributed in a crucial way to the definition of a high-level program. Special thanks also go the Instructors of the pre-conference workshop, Ian Head, Dino Virdis, and Deepak Pant for making it a successful event. We are also pleased to mention that, following the meeting, a selected number of articles will appear in extended form, after successful peer review, in a special issue of Fuel Cells journal (Wiley) which also generously supported an award for the best Poster presentation.

Welcome to Rome!

Federico & Mauro
Conference co-chairs

Dr. Federico Aulenta
(IRSA-CNR)

Prof. Mauro Majone
(Sapienza University of Rome)

International Scientific Committee

Lars Angenent *(Cornell University, USA - University of Tübingen, Germany)*
Frederic Barriere *(University of Rennes, France)*
Alain Bergel *(University of Toulouse, France)*
Pierangela Cristiani *(RSE, Italy)*
Abraham Esteve-Nunez *(University of Alcalà, Spain)*
Roberto Farina *(ENEA, Italy)*
Stefano Freguia *(University of Queensland, Australia)*
Albert Guisasola *(Universitat Autonoma de Barcelona, Spain)*
Falk Harnisch *(UFZ, Germany)*
Ian Head *(Newcastle University, United Kingdom)*
Ioannis Ieropoulos *(University of Bristol, United Kingdom)*
Bruce Logan *(Penn State University, USA)*
Ricardo Louro *(Universidade Nova de Lisboa, Portugal)*
Enrico Marsili *(Dublin City University, Ireland)*
Deepak Pant *(VITO, Belgium)*
Giuliano Premier *(University of Wales, United Kingdom)*
Sebastià Puig *(University of Girona, Spain)*
Korneel Rabaey *(Gent University, Belgium)*
Miriam Rosenbaum *(Rwth Aachen University, Germany)*
Amelia-Elena Rotaru *(University of Southern Denmark, Denmark)*
Uwe Schroeder *(University of Braunschweig, Germany)*
Annemiek Ter Heijne *(Wageningen University, The Netherlands)*
Stephan Venkata Mohan *(Indian Institute of Chemical Technology, India)*
Marianna Villano *(Sapienza University, Italy)*
Kazuya Watanabe *(Tokyo University, Japan)*
Tian Zhang *(Technical University of Denmark, Denmark)*
Yifeng Zhang *(Technical University of Denmark, Denmark)*

Local Organizing Committee

Federico Aulenta *(IRSA-CNR, Conference co-chair)*
Mauro Majone *(Sapienza University, Conference co-chair)*
Giorgio Capuani *(Sapienza University)*
Carolina Cruz Viggi *(IRSA-CNR)*
Raffaella Gianferri *(Sapienza University)*
Agnese Lai *(Sapienza University)*
Paola Paiano *(Sapienza University)*
Enza Palma *(IRSA-CNR)*
Roberta Verdini *(Sapienza University)*
Marco Zeppilli *(Sapienza University)*

Organizing Secretariat

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From Fundamentals to Systems

THANKS TO:

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PROGRAM AT A GLANCE

September 26 MONDAY

ROOM 1, GROUND FLOOR	ROOM 2, 2ND FLOOR
10:00 - 13:00 Microbial Electrochemistry Workshop	
13:00 - 14:00 LIGHT LUNCH FOR WORKSHOP PARTICIPANTS	
15:20 - 15:50 Invited lecture	15:50 - 16:50 SESSION 2 Microbiological characterization and synthetic biology approaches in MET
15:20 - 16:50 SESSION 1 Novel Applications of MET	

17:00 - 19:30 WELCOME COCKTAIL (MUSEO DI ARTE CLASSICA)

September 27 TUESDAY

8:00 - 9:00 POSTER INSTALLATION (LABORATORY OF INORGANIC CHEMISTRY)

ROOM 1, GROUND FLOOR	ROOM 2, 2ND FLOOR
9:00 - 10:50 SESSION 3 Microbial Electrosynthesis and Electrofermentations	9:30 - 10:50 SESSION 4 Fundamentals of microbial extracellular electron transfer
10:50 - 11:20 COFFEE BREAK & POSTER VIEWING	
9:20 - 9:30 Invited lecture	11:20 - 13:00 SESSION 6 Successful and unsuccessful examples of up-scaled MET
11:20 - 13:00 SESSION 5 Microbial Electrosynthesis and Electrofermentations	
13:00 - 14:30 LUNCH & POSTER VIEWING	
14:30 - 15:00 Invited lecture	15:00 - 16:20 SESSION 8 Successful and unsuccessful examples of up-scaled MET
14:30 - 16:20 SESSION 7 Microbial electrosynthesis and Electrofermentations	
16:20 - 16:50 COFFEE BREAK & POSTER VIEWING	
16:50 - 17:30 SESSION 9 Microbial electrosynthesis and Electrofermentations	16:50 - 18:00 SESSION 10 Successful and unsuccessful examples of up-scaled MET
	17:30 - 18:00 Invited lecture

20:30 SOCIAL DINNER

September 28 WEDNESDAY

8:00 - 9:00 POSTER INSTALLATION (LABORATORY OF INORGANIC CHEMISTRY)

ROOM 1, GROUND FLOOR	ROOM 2, 2ND FLOOR
9:00 - 10:50 SESSION 11 Microbial Electrosynthesis and Electrofermentations	9:30 - 10:50 SESSION 12 Fundamentals of microbial extracellular electron transfer
9:00 - 9:30 Invited lecture	
10:50 - 11:20 COFFEE BREAK & POSTER VIEWING	
11:20 - 13:00 SESSION 13 Novel applications of MET	11:50 - 13:10 SESSION 14 Process Engineering Aspects of MET
11:20 - 11:50 Invited lecture	
13:10 - 14:30 LUNCH & POSTER VIEWING	
14:30 - 16:00 SESSION 15 Novel applications of MET	15:00 - 16:00 SESSION 16 Process Engineering Aspects of MET

17:00 - 17:30 CLOSING CEREMONY / PRIZE GIVING

EU-ISMET 2016 The 3rd European Meetings of the International Society for Microbial Electrochemistry and Technology

September 26, 2016

WORKSHOP

ROOM 1, GROUND FLOOR

9:00 - 10:00 Registration

10:00 - 13:00
Microbial Electrochemistry Workshop

10:00 - 11:00 Lecture 1
"MICROBIOLOGICAL TECHNIQUES TO STUDY ELECTROACTIVE BIOFILMS"
Instructor: ***Prof. Ian Head*** *(Professor of Environmental Microbiology at Newcastle University and Editor-in-Chief of ISME Journal)*

11:00 -12:00 Lecture 2
"SPECTROELECTROCHEMICAL TECHNIQUES TO CHARACTERIZE THE ELECTRON TRANSFER CAPABILITIES OF ELECTROACTIVE BIOFILMS"
Instructor: ***Dr. Dino Virdis*** *(Research Fellow at the Advanced Water Management Centre of the University of Queensland)*

12:00 - 13:00 Lecture 3
"MICROBIAL ELECTROCHEMICAL REACTORS AND MATERIALS"
Instructor: ***Dr. Deepak Pant*** *(Senior Scientist at VITO, Flemish Institute for Technological Research)*

13:00 - 14:00 Light lunch for Workshop participants

PROGRAM

14:00 - 15:00 **Meeting Registration**

15:00 - 15:20 **Welcome and Opening Remarks**

ROOM 1, GROUND FLOOR

15:20 - 16:50

Session 1: Novel Applications of MET

Chair: ***Korneel Rabaey*** *(Gent University, Belgium)*

15:20 - 15:50 Invited lecture:
"THE SOIL BIOSNORKEL: MICROBIAL EXTRACELLULAR ELECTRON TRANSFER MECHANISMS OF BIOCHAR"
Largus T. Angenent *(Cornell University, USA - University of Tübingen, Germany, ISMET President)*

15:50 - 16:10
"RECOVERY OF COPPER AT MICROMOLAR CONCENTRATION FROM DISTILLERY WASTEWATER USING BIOELECTROCHEMICAL SYSTEMS"
E. Milner, B. Christgen, H. Christensen, T. Curtis, K. Scott, E. Yu, I. Head

16:10 - 16:30
"CONSTRUCTED WETLAND-MICROBIAL FUEL CELL ENHANCES DOMESTIC WASTEWATER TREATMENT EFFICIENCY"
C. Corbella, J. Puigagut

16:30 - 16:50
"TWO-STAGE BIO-ELECTROCHEMICAL PROCESS FOR TREATMENT OF SULFATE-RICH WASTWATERS"
G. Pozo, P. Ledezma, J. Keller, S. Freguia

ROOM 2, 2ND FLOOR

15:50 - 16:50

Session 2: Microbiological characterization and synthetic biology approaches in MET

Chair: ***Tian Zhang*** *(Technical University of Denmark, Denmark)*

15:50 - 16:10
"IDENTIFYING ACTIVE MICROBIAL POPULATIONS IN A MICROBIAL ELECTROLYSIS CELL COUPLED TO A THERMOPHILIC ANAEROBIC DIGESTER"
M. Cerrillo, M. Viñas, A. Bonmatí

16:10 - 16:30
"DEFINED CO-CULTURES OF PSEUDOMONAS AERUGINOSA PA14 AND ENTEROBACTER AEROGENES FOR ENHANCED CURRENT GENERATION IN BIOELECTROCHEMICAL SYSTEMS"
S. Schmitz, M. A. Rosenbaum

16:30 - 16:50
"LA TAVOLOZZA ELETTRICA - THE DIVERSITY OF ELECTROACTIVE MICROORGANISMS"
C. Koch, F. Harnisch

17:00 - 19:30 **Welcome Cocktail (Museo di Arte Classica)**

EU-ISMET 2016
The 3rd European Meetings of the International Society for Microbial Electrochemistry and Technology

September 27, 2016

8:00 - 9:00
Poster Installation (Laboratory of Inorganic Chemistry)

ROOM 1, GROUND FLOOR

9:00 – 10:50
Session 3: Microbial Electrosynthesis and Electrofermentations
Chair: ***Giuliano Premier*** *(University of South Wales, United Kingdom)*

9:00 - 9:30 Invited lecture:
"SPOROMUSA OVATA-DRIVEN MICROBIAL ELECTROSYNTHESIS: PROGRESS AND PERSPECTIVE"
Tian Zhang *(Technical University of Denmark, Denmark)*

9:30 - 9:50
"BIOELECTROCHEMICAL CONVERSION OF CO_2 TO CHEMICALS: REALIZATION AND PERSPECTIVES"
S. Bajracharya, K. Vanbroekhoven, C.J.N. Buisman, D.P.B.T.B. Strik, D. Pant

9:50 - 10:10
"ANODIC MICROBIAL ELECTROSYNTHESIS: ANAEROBIC PRODUCTION OF AMINO ACIDS BY CORYNEBACTERIUM GLUTAMICUM"
I. Vassilev, B. Virdis, J.O. Krömer

10:10 - 10:30
"LONG TERM CONTINUOUS MICROBIAL ELECTROSYNTHESIS FOR PRODUCTION OF ACETATE AND SECONDARY ALCOHOL FROM CO_2 AND CURRENT"
J.B.A. Arends, S. A. Patil, H. Roume, K. Rabaey

10:30 - 10:50
"ELECTROCHEMICAL CONVERSION OF CARBON DIOXIDE INTO METHANE BY USING INDIGENOUS MICROORGANISMS IN SUBSURFACE OIL RESERVOIR"
H. Maeda, M. Ikarashi, H. Kobayashi, K. Sato

ROOM 2, 2ND FLOOR

9:30 - 10:50
Session 4: Fundamentals of microbial extracellular electron transfer
Chair: ***Kazuya Watanabe*** *(Tokyo University, Japan)*

9:30 - 9:50
"TWO BASE PAIRS CAN CHANGE IT ALL: COMPARATIVE ANALYSIS OF A SPONTANEOUS LASR MUTANT OF PSEUDOMONAS AERUGINOSA FOR BES PERFORMANCE"
C. Berger, M.A. Rosenbaum

9:50 - 10:10
"PRESENCE OF MULTIPLE PH DEPENDENT REDOX PEAKS DURING ANODE RESPIRATION BY THERMINCOLA FERRIACETICA SUGGESTS THE PRESENCE OF MULTIPLE ELECTRON TRANSPORT PATHWAYS"
B. G. Lusk, P. Parameswaran, S.C. Popat, B.E. Rittmann, C.I. Torres

10:10 - 10:30
"DIALOGO SOPRA I DUE MASSIMI SISTEMI DEL MONDO" ROLE AND MECHANISM OF FLAVIN-CYTOCHROME INTERACTIONS IN EXTRACELLULAR ELECTRON TRANSFER"
R. O. Louro

10:30 - 10:50
"EXTRACELLULAR POLYMERIC SUBSTANCES PLAY ROLES IN EXTRACELLULAR ELECTRON TRANSFER OF SHEWANELLA ONEIDENSIS MR-1"
Y. Xiao, E-H. Zhan, Y-F. Da, H.E.M. Christense, J. Zhan, F. Zhao

10:50 - 11:20 Coffee Break & Poster viewing

ROOM 1, GROUND FLOOR

11:20 - 13:00

Session 5: Microbial Electrosynthesis and Electrofermentations

Chair: ***Deepak Pant*** *(VITO, Belgium)*

11:20- 11:40

"ELECTRICITY DRIVEN FERMENTATIONS AND THEIR IMPLICATIONS FOR MICROBIAL ELECTROSYNTHESIS"

K. Rabaey, S. Andersen, M. Coma, R. Ganigué, J. Arends

11:40 - 12:00

"COUPLING ORGANIC WASTE OXIDATION TO MICROBIAL ELECTROSYNTHESIS FOR THE ENERGY-EFFICIENT PRODUCTION OF PLATFORM CHEMICALS: LESSONS FROM THE FRENCH 'BIORARE' project"

T. Bouchez, N. Bernet, A. Bergel, L. Aissani, A. Huyard

12:00 - 12:20

"CONTINUOUS LONG-TERM BIOELECTROCHEMICAL CHAIN ELONGATION"

S. Raes, L. Jourdin, C. Buisman, D. Strik

12:20 - 12:40

"MICROBIAL ELECTROSYNTHESIS OF BUTYRATE FROM CARBON DIOXIDE: SELECTIVE PRODUCTION AND EXTRACTION"

P. Batlle-Vilanova, R. Ganigué, S. Ramió-Pujol, L. Bañeras, G. Jiménez, M. Hidalgo, M.D. Balaguer, J. Colprim, S. Puig

12:40 - 13:00

"BASICS AND PRINCIPLES OF ELECTRO-FERMENTATION"

R. Moscoviz, E. Trably, N. Bernet

ROOM 2, 2ND FLOOR

11:20 - 13:00

Session 6: Successful and unsuccessful examples of up-scaled MET

Chair: ***Bruce Logan*** *(Penn State University, USA)*

11:20 - 11:40

"SMARTWETLAND: CONTROLLING AND OPTIMIZING THE PERFORMANCE OF A FULL SCALE BIOELECTROCHEMICAL-ASSISTED WETLAND"

A. Berná A., D. Casillas, E. Sebastian, C. Aragon, K. Fahd, J.R. Pidre, J.J. Salas, C. Manchón, A. Prado, A. Aguirre, R. Esteve, B. Barroeta, J. Fernández, J. Mancebo, A. Esteve-Nuñez

11:40 - 12:00

"NONIT: SCALING-UP BES TOWARDS NITRATE-POLLUTED GROUNDWATER TREATMENT APPLICATION"

N. Pous, S. Puig, J. Manzano, S. Casas, P. Vall, R. López, M.D. Balaguer, J. Colprim

12:00 - 12:20

"UP-SCALING OF BIOELECTROCHEMICAL SYSTEMS FOR NITROGEN RECOVERY"

P. Zamora, I. Salcedo, P. Kuntke, A. Jeremiasse

12:20 - 12:40

"START-UP AND SUCCESSFUL LONG-TERM OPERATION OF A PILOT-SCALE MEC FOR H2 PRODUCTION FROM URBAN WASTEWATER"

A. Guisasola, A. Martínez-Miro, J. Guerrero, Y. Ruiz. J.A. Baeza

12:40 - 13:00

"SCALE UP AND DEVELOPMENT OF A MICROBIAL ELECTROLYSIS CELL FOR DOMESTIC WASTEWATER TREATMENT"

S.E. Cotterill, C. Jones, T.P. Curtis

13:00 - 14:30 Lunch & Poster viewing

ROOM 1, GROUND FLOOR

14:30 - 16:20 Session 7: Microbial electrosynthesis and Electrofermentations

Chair: ***Sebastià Puig*** *(University of Girona, Spain)*

14:30 - 15:00 Invited lecture:
"MICROBIAL ELECTROCHEMICAL TECHNOLOGIES MEET ANAEROBIC DIGESTION: FROM BIOGAS PURIFICATION AND NUTRIENT RECOVERY TO ELECTRO-FERMENTATION"
Marianna Villano *(Sapienza University of Rome, Italy)*

15:00 - 15:20
"MICROBIAL ELECTROSYNTHESIS OF HYDROGEN PEROXIDE IN MICROBIAL REVERSE-ELECTRODIALYSIS ELECTROLYSIS CELL"
X. Li, I. Angelidaki, Y. Zhang

15:20 - 15:40
"CO_2-CONVERSION TO METHANE BY MICROBIOLOGICAL ELECTROSYNTHESIS"
M. Haberbauer, C. Hemmelmair, S. Thallner, S. Schlager, S. Martinek, W. Schnitzhofer

15:40 - 16:00
"COMPARISON OF DIFFERENT BIOCATHODE START-UP STRATEGIES AND EVALUATION OF THEIR MICROBIAL COMMUNITY"
R. Mateos, A. Sotres, A. Escapa, A. Morán

16:00 - 16:20
"CUPRIAVIDUS NECATOR AS A PRODUCTION STRAIN IN MICROBIAL ELECTROSYNTHESIS"
A. Sydow, J. K. Kellermann, T. Krieg, K.-M. Mangold, D. Holtmann

ROOM 2, 2ND FLOOR

15:00 - 16:20

Session 8: Microbiological characetrization and synthetic biology approaches in MET

Chair: ***Miriam Rosenbaum*** *(RWTH Aachen University, Germany)*

15:00 - 15:20
"CORE MICROBIOME OF MFCS USED TO TREAT SWINE MANURE AT DIFFERENT EXTERNAL RESISTANCES"
A. Vilajeliu-Pons, L. Bañeras, S. Puig, D. Molognoni, A. Vilà-Rovira, E. Hernández-Del Amo, M. Do

15:20 - 15:40
"COLONISATION AND DEVELOPMENT OF ANODIC BIOFILMS ON CARBON FELT ELECTRODES"
D.M. Popescu, I. Head, K. Scott, E. Yu

15:20 - 15:40
"ANODIC BIOFILM MICROBIAL COMMUNITIES IN DIFFERENT MICROBIAL ELECTROCHEMICAL CELLS: COMPARISON OF METAGENOMIC ANALYSIS"
L. Rago, A. Schievano, J. A. Baeza, A. Guisasola

15:40 - 16:00
"ELECTROCHEMICAL STIMULATION OF THERMOTOGA NEAPOLITANA CULTURES"
P. Cristiani, A. Schievano, M. Tucci, G. D'Ippolito, L. Dipasquale, A. Fontana

16:00 - 16:20
"MFCs BIOCATHODES LIFE BY 3D X-RAY MICROCOMPUTED TOMOGRAPHY"
S. Marzorati, M. Lorenzi, S. Fest-Santini, M. Santini, P. Cristiani

16:20 - 16:50 Coffee Break & Poster viewing

ROOM 1, GROUND FLOOR

16:50 - 17:30
Session 9: Novel Applications of MET
Chair: ***Pierangela Cristiani*** *(RSE, Italy)*

16:50 - 17:10
"BIOELECTROCHEMICAL ENHANCEMENT OF METHANE PRODUCTION IN LOW TEMPERATURE ANAEROBIC DIGESTION AT 10°C"
D. Liu, L. Zhang, S. Chen, C. Buisman, A. ter Heijne

17:10 - 17:30
"BIOELECTROCHEMICAL SYSTEMS FOR BTEX REMOVAL"
M. Daghio, S. Sandionigi, G. Bestetti, B. Leoni, M. Papacchini, E. Jalilnejad, A. Franzetti

ROOM 2, 2ND FLOOR

16:50 - 18:00
Session 10: Process Engineering aspects of MET
Chair: ***Ian Head*** *(Newcastle University, United Kingdom)*

16:50 - 17:10
"MODELLING MULTISPECIES GLUCOSE FED BIOFILM IN MFC"
P. Belleville, G. Merlin, J. Ramousse, C. Picioreanu, J. Deseure

17:10 - 17:30
"IN SITU MEMBRANE ELECTROLYSIS ENABLES HIGH-RATE PRODUCTION AND ELECTROCHEMICAL PH CONTROL IN MICROBIAL ELECTROSYNTHESIS OF ACETIC ACID FROM CARBON DIOXIDE"
S. Gildemyn, K. Verbeeck, R. Jansen, K. Rabaey

17:30 - 18:00 **Invited lecture:**
"PROGRESS IN SCALING UP MICROBIAL FUEL CELLS FOR WASTEWATER TREATMENT"
Bruce E. Logan *(Penn State University, USA)*

20:30 Social Dinner

EU-ISMET 2016
The 3rd European Meetings of the International Society for Microbial Electrochemistry and Technology

September 28, 2016

8:00 - 9:00
Poster Installation (Laboratory of Inorganic Chemistry)

ROOM 1, GROUND FLOOR

9:00 - 10:50
Session 11: Process Engineering Aspects of MET
Chair: ***Uwe Schroeder*** *(University of Braunschweig, Germany)*

9:00 - 9:30 **Invited lecture:**
"MICROBIAL ELECTROCHEMICAL TECHNOLOGIES FOR ENERGY STORAGE"
Annemiek ter Heijne *(Wageningen University, The Netherlands)*

9:30 - 9:50
"SOME ASPECTS OF BIOCATHODE PERFORMANCES IN MEMBRANELESS MICROBIAL FUEL CELLS FED BY DIFFERENT ORGANIC SUBSTRATES"
A. Colombo, S. P. Trasatti

9:50- 10:10
"TEXTILE CARBON ANODES FOR THE APPLICATION OF MFCS FOR PAPER MILL WASTEWATER TREATMENT"
L. Poetschke, M. Heyer, G. Stegschuster, P. Huber, S. Schriever, G. Wortberg, M. Beckers, N. Kroppen, J. Gräbel, P. Ueberholz, D. Bastian, J. Pinnekamp, P. Farber, T. Gries, M. A. Rosenbaum

10:10 - 10:30
"POLY(ACRYLO)NITRILE DERIVED CARBON BASED NANOFIBER MATS AS ANODES IN SINGLE CHAMBER MICROBIAL FUEL CELLS"
G. Massaglia, M. Gerosa, V. Agostino, A. Sacco, G. Salvador, S. Bianco, M. Cocuzza, A. Chiodoni, V. Margaria, M. Quaglio

10:30 - 10:50
"CONTROL OF VOLTAGE FROM MICROBIAL FUEL CELL USING GAIN SCHEDULING CONTROL STRATEGY"
H. C. Boghani, I. Michie, R. M. Dinsdale, A. J. Guwy, G. C. Premier

ROOM 2, 2ND FLOOR

9:30 - 10:50

Session 12: Fundamentals of microbial extracellular electron transfer

Chair: **Abraham Esteve-Nuñez** (***University of Alcala, Spain***)

9:30 - 9:50
"ULTRA-FAST MONITORING OF ELECTRON TRANSFER ABILITY ACROSS ANODIC BIOFILM"
X. Zhang, J. Philips, H. Roume, K. Guo, K. Rabaey, A. Prévoteau

9:50 - 10:10
"ASSEMBLY OF REDOX PROTEINS INTO SUPRAMOLECULAR NANOWIRES"
M. A Thirumurthy, A. K Jones

10:10 - 10:30
"EVALUATION OF DIRECT INTERSPECIES ELECTRON TRANSFER IN ANAEROBIC DIGESTION OF FOOD WASTE WITH BIOCHAR"
C. Cruz Viggi, E. Palma, S. Simonetti, P. Pagliaccia, A. Gianico, S. Fazi, C. Braguglia, F. Aulenta

10:30 - 10:50
"LA TRAVIATA ENERGETICA - THE MICROBIAL ELECTROCHEMICAL PELTIER HEAT"
B. Korth, T. Maskow, C. Picioreanu, F. Harnisch

10:50 - 11:20 Coffee Break & Poster viewing

ROOM 1, GROUND FLOOR

11:20 - 13:10

Session 13: Novel applications of MET

Chair: ***Ricardo Louro*** *(Universidade Nova de Lisboa, Portugal)*

11:20 - 11:50 Invited lecture:
"BIOREMEDIATION OF CONTAMINATED WATER: A NICHE FOR MICROBIAL ELECTROCHEMICAL TECHNOLOGIES"
Sebastià Puig *(University of Girona, Spain)*

11:50 - 12:10
"AUTOTROPHIC NITRATE REMOVAL FROM AQUACULTURE STREAMS IN AN UPFLOW BIOELECTROCHEMICAL SYSTEM"
E. Sander, B. Virdis, S. Freguia

12:10 - 12:30
"A NOVEL BIOELECTROCHEMICAL APPROACH FOR CHLORINATED ALIPHATIC HYDROCARBONS REDUCTIVE AND OXIDATIVE DECHLORINATION"
A. Lai, R. Verdini, M. Simone, F. Aulenta, M. Majone

12:30 - 12:50
"TOWARDS MICROBIAL FUEL CELL BASED VOLATILE FATTY ACID SENSOR BY APPLYING SPECIFIC POISED POTENTIALS"
A. Kaur, R. M. Dinsdale, A. J. Guwy, G. C. Premier

12:50 - 13:10
"POLICYCLIC AROMATIC HYDROCARBONS (PAHS) REMOVAL IN SINGLE-CHAMBER, AIR CATHODE MICROBIAL FUEL CELL: CHEMISTRY AND ECOTOXICOLOGY"
R. A. Nastro, E. Gambino, M. Toscanesi, F. Flagiello, E. Jannelli, G. Falcucci, M. Minutillo, M. Trifuoggi, M. Guida

ROOM 2, 2ND FLOOR

11:50 - 13:10

Session 14: Process Engineering Aspects of MET

Chair: ***Lars Angenent*** *(Cornell University, USA and University of Tubingen, Germany)*

11:50 - 12:10

"STRUCTURAL AND MATERIAL ASPECTS OF BIOFILM ELECTRODES"

U. Schröder

12:10 - 12:30

"CO_2 REMOVAL IN A MICROBIAL ELECTROLYSIS CELL: ION EXCHANGE MEMBRANE EFFECTS ON TRANSPORT PHENOMENA AND ENERGY LOSSES"

M. Zeppilli, A. Mattia, M. Villano, F. Aulenta, M. Majone

12:30 - 12:50

"HYDROPHOBIC MEMBRANES ENABLE TRANSPORT OF CO2 AND NH3 TO IMPROVE PERFORMANCE OF MICROBIAL ELECTROLYSIS CELLS"

T.H.J.A Sleutels, B.J. Hoogland, P. Kuntke, A. ter Heijne, C.J.N. Buisman, H.V.M. Hamelers

12:50 - 13:10

"MESOPOROUS SILICA-BASED PEM COMPOSITES MEMBRANES FOR APPLICATIONS IN SINGLE-CHAMBER MICROBIAL FUEL CELLS (MFC)"

L. Millia, S. Angioni, G. Bruni, P. Mustarelli, E. Quartarone

13:10 - 14:30 Lunch & Poster viewing

ROOM 1, GROUND FLOOR

14:30 - 16:00

Session 15: Novel applications of MET

Chair: ***Dino Virdis*** *(University of Queensland, Australia)*

14:30 - 15:00 **Invited lecture:**
"SHEWANELLA SENSES ELECTRODE POTENTIAL FOR CATABOLIC REGULATION"
Kazuya Watanabe *(University of Tokyo, Japan)*

15:00 - 15:20

"LONG-TERM STABILITY OF ACIDOPHILIC TETRATHIONATE-FED MICROBIAL FUEL CELL"

M. L.K. Sulonen, A.-M. Lakaniemi, M. E. Kokko, J. A. Puhakka

15:20 - 15:40

"L'ODORE DI GAS BIOLOGICO - BIOFILMS AS RECOGNITION ELEMENT FOR VFA SENSORS IN ANAEROBIC DIGESTION"

J. Kretzschmar, J. Liebetrau, M. Mertig, F. Harnisch

15:40 - 16:00

"TOWARDS MINIATURE MICROBIAL FUEL CELLS FOR WATER QUALITY MONITORING"

J. Chouler, P. Cameron, B. Kaspryzk-Hordern, M. Di Lorenzo

ROOM 2, 2ND FLOOR

15:00 – 16:00

Session 16: Process Engineering Aspects of MET

Chair: ***Yifeng Zhang*** *(Technical University of Denmark, Denmark)*

15:00 - 15:20

"AMMONIUM TRANSPORT, REMOVAL AND RECOVERY IN CURRENT-DRIVEN PROCESSES"

M. Rodriguez Arredondo, P. Kuntke, A. ter Heijne, H.V. M. Hamelers, C. J.N. Buisman

ROOM 2, 2ND FLOOR

15:20 - 15:40

"INFLUENCE OF CATHODE SPECIFIC AREA ON THE PERFORMANCE OF ANAEROBIC ELECTROCHEMICAL MEMBRANE BIOREACTOR"

V. Sapireddy, A. Ragab, K. P. Katuri, Y. Yu, Z. Lai, E. Qiang Li, S. T. Thoroddsen, P. E. Saikaly

15:40 - 16:00

"FLUIDIZED ANODES VERSUS NON-CONDUCTIVE FLUIDIZED BEDS IN THE TREATMENT OF A BREWERY WASTEWATER"

S. Tejedor-Sanz, P. Fernandez, P. Letón, C. Torres, A. Esteve-Nuñez

16:00 - 17:00

Roundtable on "Future technological and scientific challenges of METs"

Moderator: ***Korneel Rabaey*** *(Gent University, Belgium)*

17:00 - 17:30

Closing Ceremony / Prize giving

Posters - Session P1

Session P1 (Posters listed here should be installed on **September 27** from 8:00 to 9:00 in the Laboratory of Inorganic Chemistry, located at the ground floor of Chemistry Department and should be removed before 8:00 of September 28)

P1) *"REDUCTIVE DECHLORINATION OF 1,2-DICHLOROETHANE WITH AN AQDS-MODIFIED ELECTRODE"* ***P. Leitão, M. Bellagamba, S. Rossetti, H. P. A. Nouws, A. S. Danko, F. Aulenta***

P2) *"INVESTIGATING THE EFFECT OF INOCULUM AND SUBSTRATE TYPE ON MICROBIAL FUEL CELL (MFC) PERFORMANCE"* ***P. Izadi, E. Milner, I. Head, E. Yu***

P3) *"MONITORING OF VOLATILE FATTY ACIDS DURING ANAEROBIC DIGESTION USING A MICROBIAL ELECTROCHEMICAL SENSOR"* ***X. Jin, I. Angelidaki, Y. Zhang***

P4) *"DRIVING MIXED CULTURE FERMENTATION WITH MICROBIAL ELECTROCHEMICAL TECHNOLOGIES"* ***P. Paiano, M. Menini, F. Sciubba, G. Zanaroli, M. Majone, M. Villano***

P5) *"MICROBIAL BIOFILM ASSESSMENT OFF TWO DIFFERENT METHANOGENIC BIOCATHODES: IDENTIFYING THE MICROBIAL ACTIVE KEY PLAYERS"* ***M. Cerrillo, M. Viñas, A. Bonmati***

P6) *"MICROBIAL RECHARGEABLE BATTERY"* ***S.D. Molenaar, A.R. Mol, T. H.J.A. Sleutels, A. ter Heijne, C.J.N. Buisman***

P7) *"OPTIMIZATION OF ANODE CURRENT COLLECTOR IN MICROBIAL FUEL CELL FOR IMPROVED POWER OUTPUT AND BACTERIAL DEVELOPMENT"* ***A. Paitier, N. Haddour, T. M. Vogel***

P8) *"ELECTROCHEMICAL CHARACTERIZATION OF THE ELECTRON-ACCEPTING AND ELECTRON-DONATING CAPACITY OF BIOCHAR"* **S. Simonetti, E. Palma, C. Cruz Viggi, F. Aulenta**

P9) *"CHARACTERIZATION OF THE ELECTROACTIVITY OF PHENAZINE-PRODUCING PSEUDOMONAS PUTIDA KT2440 FOR BIOPRODUCTIONS IN BIOELECTROCHEMICAL SYSTEM"* **T.D. Askitosari, M.A. Rosenbaum**

P10) *"ENHANCED BIOFILM GROWTH IN A NOVEL FLOW FIELD REACTOR FOR ELECTROMETHANOGENESIS"* **F. Geppert, E. Weidner, W. Schuhmann**

P11) *"ENHANCING ELECTRICITY PRODUCTION FROM WASTEWATER USING MICROBIAL FUEL CELLS"* **S. Fapetu, T. Keshavarz, M. Clements, G. Kyazze**

P12) *"BIOCATHODES FOR ENHANCING ANAEROBIC GROWTH OF CORYNE-BACTERIUM GLUTAMICUM WITH NITRATE"* **N. Xafenias, C. Kmezik, V. Mapelli**

P13) *"EFFECT OF NITROGEN ENVIRONMENT ON THE PERFORMANCE OF CONDUCTING POLYMERS/CNTs NANOCOMPOSITES MODIFIED ANODES FOR MICROBIAL FUEL CELLS (MFCs)"* **A. Dumitru, S. Vulpe, A. Radu, A. Csolti, M. Temelie, B. Bita**

P14) *"ELECTROCHEMICAL STUDY OF THE EXTRACELLULAR ELECTRON TRANSFER OF ENTEROCOCCUS FAECALIS TO ELECTRODES"* **G. Pankratova, K. Hasan, D. Leech, L. Hederstedt, L. Gorton**

P15) *"MONITORING MICROBIAL COMMUNITIES DYNAMIC DURING START-UP OF MICROBIAL FUEL CELL BY HIGH-THROUGHPUT SCREENING TECHNIQUES"* **T. Pepè Sciarria, S. Arioli, F. Adani, D. Mora**

P16) *"DIRECT EXTERNAL ELECTRON TRANSFER FROM A CATHODIC SURFACE TO A NON-HYDROGENOTROPHIC METHANOGEN"* **M.O. Yee, K. Maegaard, N.P. Revsbach, B. Thamdrup, L. DM Ottosen, A.-E. Rotaru**

Session P I

P17) *"FE-DECORATED GRAFENE OXIDE NANOPLATFORMS AS OXYGEN REDUCING ELECTROCATALYSTS IN MICROBIAL FUEL CELLS"* **B. Mecheri, F. Valentini, M.A. Costa de Oliveira, A. D'Epifanio, E. Granata, S. Licoccia**

P18) *"A TAILOR MADE PROCESS FOR THE TREATMENT OF MUNICIPAL WASTE WATER USING A BIOELECTROCHEMICAL SYSTEM"* **T. Arinda, F. Golitsch, S. Epple, T. Klessing, L.-C. Phan, D. Bogaczyk, D. Klein, J. Gesc**

P19) *"ELECTROCATALYTIC OXYGEN REDUCTION BY PORPHYRIN AND CORROLE IRON-COMPLEXES IN MICROBIAL FUEL CELLS"* **M. Raggio, B. Mecheri, A. D'Epifanio, S. Nardis, R. Paolesse, S. Licoccia**

P20) *"POTENTIOSTATIC ENRICHMENT OF ELECTROCHEMICALLY ACTIVE BACTERIA FROM POLLUTED SEDIMENTS AND SOILS"* **P. Brennan, B. Kelleher, E. Marsili**

P21) *"OBVIOUS AND HIDDEN LIMITING STEPS IN MICROBIAL FUEL CELLS"* **M. Oliot, L. Etcheverry, A. Bergel**

P22) *"HIGH-RATE MICROBIAL ELECTROSYNTHESIS OF ACETATE FROM CARBON DIOXIDE USING AN ENRICHED MIXED CULTURE: ROLE OF SULPHATE"* **J.A. Baeza, A. Martínez-Miro, J. Guerrero, M. Terrades, A. Guisasola**

P23) *"ALTERNATE SWITCHING BETWEEN MFC AND MEC FOR H2O2 SYNTHESIS AND RESIDUAL REMOVAL IN BIOELECTRO-FENTON SYSTEM"* **Y. Zhang, I. Angelidaki**

P24) *"INTEGRATION OF ELECTRODES INTO A CONVENTIONAL BIOREACTOR FOR MICROBIAL ELECTROSYNTHESIS"* **T. Krieg, A. Sydow, L.M. Phuc Phan, K.-M. Mangold, J. Schrader, D. Holtmann**

P25) *"ELECTROACTIVE BIODIVERSITY FROM DEEP HYDROTHERMAL VENTS IN BIOELECTROCHEMICAL SYSTEMS"* **G. Pillot, S. Davidson, A. Godfroy, E. Roussel, V. Cornet-Barthaux, Y. Combet-Blanc, P.-P. Liebgott**

Session P I

P26) *"THE EFFECT OF STORING INOCULUM ON THE START-UP TIME AND THE ELECTRICITY PRODUCTION OF THE MICROBIAL FUEL CELL"* **J.M. Haavisto, A.-M. Lakaniemi, J.A. Puhakka**

P27) *"INVESTIGATIONS OF THE MOLECULAR MECHANISM BEHIND 2,3-BUTANEDIOL INTERSPECIES COMMUNICATION AND SYNERGISTIC ELECTROACTIVITY IN PSEUDOMONAS AERUGINOSA C"* **E.M. Bosire, L.M. Blank, M.A. Rosenbaum**

P28) *"BACTERIAL COMPETITION FOR THE COLONIZATION OF ANODIC SURFACE IN MICROBIAL FUEL CELLS"* **A. Godain, P. Fongarland, T.M. Vogel, N. Haddour**

P29) *"MICROBIAL ELECTROREDUCTION OF BIOMASS INTERMEDIATES TO TAILOR-MADE FUELS"* **R. Uhlig, T. Rodrigues, T. Kirchner, M.A. Rosenbaum**

P30) *"ORGANIC DYE DEGRADATION FROM TEXTILE INDUSTRY WASTE"* **M. Fatima, Y. Kiros, D.A. Baker, R. Farooq, R.W. Lindstrom**

P31) *"ELUCIDATING THE EXTRACELLULAR ELECTRON TRANSFER MECHANISMS OF GRAM POSITIVE BACTERIA"* **C.M. Paquete**

P32) *"ELECTROBIOLEACHING APPLIED TO A PEGMATITE LITHIUM ORE"* **M.C. Vila, P. Leitão, A. Futuro, M.L. Dinis, A. Danko, A. Fiúza**

P33) *"IMPROVING THE PERFORMANCE OF MICROBIAL FUEL CELLS USING LACCASE-BASED BIOCATHODES"* **P. Mani, T. Keshavarz, G. Kyazze, T.S. Chandra**

P34) *"MICROBIAL ELECTROSYNTHESIS OF ACETATE WITH REDUCED GRAPHENE OXIDE-TETRAETHYLENE PENTAMINE-MODIFIED CATHODE AND A NOVEL S. OVATA ADAPTED TO REDUCE CO2"* **P.L. Tremblay, L. Chen, T. Zhang**

P35) *"PROFUMO DI MICROBI - WHAT IS THE ESSENCE OF MICROBIAL ELECTROACTIVITY?"* **F. Harnisch, C. Koch**

Session P I

P36) *"LA SCUDERIA BIOELETTROCHIMICA - BIOELECTROREACTORS AS PLATFORM FOR ENGINEERING METS"* **L.F.M. Rosa, S. Hunger, C. Gimkiewicz, A. Zehnsdorf, F. Harnisch**

P37) *"LE NOZZE ELETTROCHIMICHE DI FIGARO - INTERFACING MICROBIAL WASTE DEGRADATION WITH ELECTROORGANIC SYNTHESIS"* **R. Hegner, C. Stang, T.R. dos Santos, C. Koch, H. Strauber, C. Hartig, J. Xu, L.T. Angenent, F. Harnisch**

P38) *"EFFECT OF THE APPLIED VOLTAGE AND THE INITIAL CONCENTRATION ON THE MEC PERFORMANCES FOR H2 PRODUCTION"* **R. Cardeña, G. Buitron**

P39) *"LOW-COST AND EFFICIENT MFC MATERIALS FOR BIOELECTRICITY PRODUCTION FROM WASTE MATERIALS"* **A.-M. Lakaniemi, B. Özkaya, S. Venkata Mohan, A. Verma, J.A. Puhakka**

P40) *"RECYCLING OF FOOD WASTE BY INOCULATION OF VERMICOMPOSTED ORGANIC MATTER INTO MFC (MICROBIAL FUEL CELL) ENERGY HARVESTER"* **J. Yeo, Y. Yang**

P41) *"BENTHIC MICROBIAL FUEL CELL POWERING AN AUTONOMOUS SENSOR NODE"* **T. Chailloux, A. Capitaine, O. Amin Ali, W. Achouak, G. Pillonnet**

P42) *"CO2-CONVERSION TO BUTANOL BY MICROBIAL ELECTROSYNTHESIS"* **C. Hemmelmair, M. Haberbauer, S. Martinek, S. Thallner, G.M. Guebitz, W. Schnitzhofer**

P43) *"ELECTROCHEMICAL ANALYSIS OF ELECTRON TRANSFER MECHANISMS IN MIXED-COMMUNITY MICROBIAL BIOFILMS FROM FRESHWATER SEDIMENT"* **V. Agostino, D. Ahmeda, A. Sacco, V. Margaria, M. Quaglio**

P44) *"ELECTROCHEMICAL ANALYSIS OF PERMSELECTIVE PROPERTIES OF ANODIC BIOFILMS IN MICROBIAL FUEL CELLS"* **N. Haddour, A. Godain, A. Paitier, T.M. Vogel**

Session P I

P45) *"CHALLENGES IN UPSCALING MICROBIAL ELECTROCHEMICAL REACTORS FOR COPPER RECOVERY FROM ACIDIC LEACHATES"* ***N. Fuad, O. Modin***

P46) *"PRECONDITIONING ELECTROACTIVE BIOFILM COMMUNITIES TO IMPROVE TREATMENT AND ENERGETIC PERFORMANCE OF MICROBIAL ELECTROCHEMICAL TECHNOLOGIES"* ***S. Riedl, R. K. Brown, U. Schröder***

Posters - Session P2

Session P2 (Posters listed here should be installed on **September 28** from 8:00 to 9:00 in the Laboratory of Inorganic Chemistry, located at the ground floor of Chemistry Department and should be removed at the end of the meeting)

P47) *"LIGHT DEPENDENT EXOELECTROGENIC ACTIVITY OF SYNECHOCYSTIS SP. PCC 6803 AND PRODUCTION OF SUSTAINABLE ELECTRICITY IN A BIO-PHOTOVOLTAIC SYSTEM"* ***B. Halan, L.F. Morgado Rosa, F. Harnisch, K. Buehler, A. Schmid***

P48) *"STUDY OF THE CAPACITANCE OF GRANULAR ACTIVATED CARBON AND GRAPHITE FOR THEIR APPLICATION IN BIO-ANODES"* ***L. Caizán Juanarena, A. ter Heijne, C. Buisman***

P49) *"FLOW CELL FOR SIMULTANEOUS DETECTION OF ELECTROACTIVE BACTERIA WITH EIS AND CLSM"* ***M. Stöckl*, C. Schlegel*, A. Sydow, J. Schrader, D. Holtmann, R. Ulber, K.-M. Mangold***

P50) *"REDUCTION OF GREENHOUSE GAS EMISSIONS IN A SEDIMENTARY-MICROBIAL FUEL CELL"* ***L. Jobin, G. Raffin, P. Jame, A. Salvador, C. Jose, C. Pages, T. Pommier, J.-M. Mo***

P51) *"EXOELECTROGENIC ACTIVITY OF HYDROCARBONOCLASTIC STRAINS AND TOLUENE DEGRADATION IN BIOELECTROCHEMICAL SYSTEMS USING A PURE CULTURE OF CUPRIAVIDUS META"* ***A. Espinoza, A. Franzetti, M. Daghio, M. Seeger***

P52) *"ACID MINE DRAINAGE TREATMENT WITH MICROORGANISMS COMING FROM A LOW-PH OPERATED MICROBIAL FUEL CELL"* ***E. Leiva-Aravena, I. Vargas, E. Leiva***

P53) *"ON THE EFFECT OF ANODIC BIOFILM ENRICHMENT BY APPLYING SELECTED ELECTRO-ACTIVE MICROBES IN MICROBIAL FUEL CELLS"* **L. Koók, T. Rózsenberszki, P. Bakonyi, N. Nemestóthy, K. Bélafi-Bakó**

P54) *"INTEGRATION OF MICROBIAL ELECTROLYSIS CELLS AND ANAEROBIC DIGESTERS: IMPACT ON THE STABILITY OF THE DIGESTION PROCESS"* **R. Moreno, R. M. Alonso, X. Gómez, A. Escapa**

P55) *"DETERMINATION OF ELECTROCHEMICAL ACCESSIBLE SURFACE AREA (ECSA)"* **I. Schmidt, C.W.F. Moß, U. Schröder**

P56) *"FUEL CELL FOR CHEMICAL AND MICROBIAL WASTEWATERS TREATMENT"* **E. Razkazova-Velkova, M. Martinov, Ts. Parvanova-Mancheva, S. Stefanov, V. Beschkov**

P57) *"THE 'BIOELECTROCHEMICAL GROUNDWATER CIRCULATION WELL': A SCALABLE REACTOR CONFIGURATION FOR IN SITU TREATMENT OF CONTAMINATED GROUNDWATER"* **E. Palma, M. Petrangeli Papini, F. Aulenta**

P58) *"MICROBIAL FUEL CELL FOR Cr(VI) REDUCTION AND SIMULTANEOUS BIO-ELECTRICITY PRODUCTION USING AN ABIOTIC CATHODE"* **D. Chatzikonstantinou, A. Tremouli, K. Papadopoulou, G. Lyberatos**

P59) *"PILOT SCALE MICROBIAL ELECTROLYSIS CELL FOR NITROGEN AND CARBON REMOVAL WITH SIMULTANEOUS ENERGY PRODUCTION"* **M.I. San-Martín, R. Mateos, A. Escapa, A. Morán**

P60) *"CATHODIC REDUCTION OF PROTON BY SHEWANELLA ONEIDENSIS AND ITS EXTRACELLULAR ELECTRON TRANSFER MECHANISM"* **Y. Zhang, D. Liang, S. Lu, H. Wang, Y. Xiang**

P61) *"DIRECT ELECTRON TRANSFER BY S. CEREVISIAE IN A LAB-SCALE MICROBIAL FUEL CELL"* **R. Rossi, M. Cavina, A. Preti, L. Setti**

P62) *"BIOREMEDIATION OF CRUDE-OIL-CONTAMINATED ESTUARINE SEDIMENTS FROM RIVER TYNE (UK) BY A MICROBIAL ELECTROCHEMICAL SNORKEL"* **C. Cruz Viggi, E. Frascadore, A. Sherry, I. Head, S. Rossetti, F. Aulenta**

P63) *"EXPLORING THE ROLE OF ANODE AND CATHODE BACTERIAL COMMUNITIES ON SOIL ORGANIC MATTER TURNOVER IN A MICROBIAL FUEL CELL"* **S. Mocali, C. Chiellini, A. Lagomarsino, G. Brandi, G. Bacci, R. Fani**

P64) *"EFFICIENCY OF ACIDIC ENVIRONMENT FOR BIOCATHODE DESIGN"* **N. Chabert, W. Achouak**

P65) *"MICROBIAL FUEL CELLS: BIOCONVERSION OF POLLUTION IN BERRE LAGOON TO ELECTRICITY"* **O. Amin Ali, W. Achouak**

P66) *"APPLYING SYNTHETIC BIOLOGY AS A TOOL TO UNDERSTAND SIMULTANEOUS BIOENERGY PRODUCTION AND BIODEGRADATION PROCESS"* **O.M. Gomaa, S. Fapetu, G. Kyazze, T. Keshavarz**

P67) *"A NOVEL MICROBIAL ELECTROCHEMICAL SENSOR FOR ON-LINE MONITORING OF ANAEROBIC DIGESTION PROCESSES"* **A. Schievano, A. Colombo**

P68) *"LAYER-BY-LAYER GLUCOSE MICROSENSOR: APPLICATION IN MFC"* **M. Tucci, M. Grattieri, P. Cristiani**

P69) *"SUSTAINABLE WASTEWATER TREATMENT COUPLED TO ENERGY RECOVERY WITH MICROBIAL ELECTROCHEMICAL TECHNOLOGIES: THE WE-MET PROJECT"* **F. Aulenta, C. Cruz Viggi, C. Pastore, D. Montecchio, B. Erable, A. Bergel, M. Zeppilli, M. Villano, M. Majone, G. Lyberatos, I. Ntaikou, K. Papadopoulou, G. Antonopoulou, A. Tremouli, S. Da Silva, H. Chouchane, A.S. Masmoudi, A. Cherif**

P70) *"FLOATING MFCs FOR ENERGY HARVESTING. A CELL DESIGN OVERVIEW"* **D. Perrino, S. Trasatti, A. Schievano, P. Cristiani**

Session P2

P71) *"FLAVOCYTOCHROME AT THE MICROBE-MINERAL INTERFACE OF SHEWANELLA ONEIDENSIS UNDER MINERAL RESPIRING CONDITIONS"* **M.P. Norman, G. White, M.J. Edwards, T.A. Clarke**

P72) *"RAPID AND ACCURATE ASSAY FOR BIOLOGICAL OXYGEN DEMAND VIA HYDRODYNAMIC CHRONOAMPEROMETRY"* **A. Prévoteau, C. Cagnetta, K. Rabaey**

P73) *"EXPERIMENTAL EVALUATION OF ORGANIC CARBON AND AMMONIUM REDUCTION THROUGH NITRITE ACCUMULATION IN MICROBIAL FUEL CELLS (MFCS)"* **I. Bavasso, L. Di Palma**

P74) *"IMPROVING HYDROGEN MEDIATED MICROBIAL ELECTROCHEMICAL REDUCTION OF CO2 BY SEPARATING THE TWO STEPS OF THE PROCESS"* **E. Blanchet, F. Duquenne, Y. Rafrafi, L. Etcheverry, B. Erable, A. Bergel**

P75) *"A NOVEL ELECTRICALLY CONDUCTIVE AND POROUS HOLLOW FIBER CATHODE DESIGN FOR RECYCLING CO2 TO CH4 THROUGH ELECTRO-METHANOGENESIS"* **M.F. Alqahtani, V. Sapireddy, K.P. Katuri, Y. Yu, Z. Lai, P.E. Saikaly**

P76) *"MULTI-STAGE MICROBIAL FUEL CELL-BASED BIOSENSOR FOR BIOCHEMICAL OXYGEN DEMAND AND TOXICITY DETECTION"* **M.W.A. Spurr, E.H. Yu, K. Scott, T.P. Curtis, I.M. Head**

P77) *"A BIOLOGICAL MODEL FOR MICROBIAL FUEL CELLS TREATING WASTE-WATER"* **D. Molognoni, S. Puig, A. Capodaglio, M.D. Balaguer, J. Colprim**

P78) *"TWO PHASE ANAEROBIC DIGESTION EFFLUENTS AS FEEDSTOCKS TO BIOELECTROMETHANOGENESIS SUSTENANCE"* **M. Zeppilli, I. Ceccarelli, M. Villano, M. Majone**

P79) *"THIOALKALIVIBRIO NITRATIREDUCENS, A SULFUR-OXIDIZING BACTERIUM ABLE OF ELECTROLITHOAUTOTROPHIC GROWTH TO DESIGN BIOCATHODES"* **M. Rimboud, W. Achouak**

P80) *"HOW THE UNCOMPENSATED RESISTANCE AND DOUBLE LAYER CAPACITANCE CAN INFLUENCE YOUR POLARIZATION DATA"* **J. Madjarov, F. Wiedenmann, J. Erben, A. Götze, S. Kerzenmacher**

P81) *"KINETIC PARAMETER ESTIMATION OF MICROBIAL ELECTROLYSIS CELLS FED WITH ACETATE FOR HYDROGEN PRODUCTION"* **V. Alcaraz-Gonzalez, O.R. Ayala-Campos, A. Marone, E. Latrille, E. Trably, A. Carmona, R. Moscoviz, J.-P. Steyer, N. Bernet**

P82) *"VISIBLE-LIGHT DRIVEN HYDROGEN PRODUCTION BY SHEWANELLA ONEIDENSIS MR-1"* **S.F. Rowe, E.V. Ainsworth, C.W.J. Lockwood, E. Taek Hwang, B. Reuillard, L.J.C. Jeuken, E. Reisner, J.N. Butt**

P83) *"LIFES-CO2R: LIQUID FUEL AND BIOENERGY SUPPLY FROM CO2 REDUC-TION"* **J.M. Fontmorin, K. Scott, I. Head, T. Curtis, E. Yu**

P84) *"BIOHYDROGEN PRODUCTION FROM RESIDUAL GLYCEROL COUPLED WITH MICROBIAL FUEL CELL TREATMENT OF THE SPENT MEDIUM"* **V. Sanchez-Torres, C.P. Yu**

P85) *"GRAPHITE-COATED STAINLESS STEEL FELT AS A HIGH-PERFORMANCE ANODE FOR BIOELECTROCHEMICAL SYSTEMS"* **K. Guo, D. Hidalgo, T. Tommasi, K. Rabaey**

P86) *"PERFORMANCE ASSESSEMENT OF TUBULAR MICROBIAL FUEL CELLS (TMFCS) OPERATED AT LOW PH"* **R.A. Nastro, V. Cigolotti, N. Jannelli, M. Minutillo, G. Falcucci**

P87) *"RESOURCE RECOVERY WITH EXTREMOPHILIC MICROBIAL ELECTRO-CHEMICAL SYSTEMS"* **G. Ni, T.H.J.A. Sleutels, A. Ter Heijne, M. Dopson**

P88) *"EFFECTS OF PEI, A MEMBRANE PERMEABILIZER ON GENOTOXIC- AND OXIDATIVE STRESS-SENSITIVE ESCHERICHIA COLI BIOREPORTERS"* **S.M. Sandrine**

P89) *"DEVELOPMENT OF AN ANAEROBIC DIGESTER INCORPORATING A MICROBIAL ELECTROLYSIS CELL TO ENHANCE BIOGAS PRODUCTION FROM SEWAGE SLUDGE"* ***E. Borràs, P. Bosch, P. Sànchez, N. Díaz, F. Andrés, J. García***

P90) *"EFFECT OF SULPHIDE SCAVENGING ON HYDROCARBON BIODEGRADATION"* ***E. Vaiopoulou, M.Z. Vanpoucke, A. Sherry, M. Daghio, C. Cruz Viggi, I. M Head, A. Franzetti, F. Aulenta, K. Rabaey***

P91) *"SUPERACIDICTITANIA-LOADED POLYMER MEMBRANES FOR MICROBIAL FUEL CELL APPLICATIONS"* ***L. Mazzapioda, M.A. Navarra, S. Panero***

GENERAL INFORMATION

Conference Venue :

Department of Chemistry (NEC)
Sapienza University
Piazzale Aldo Moro 5 , 00185 ROME

Official language

The official language will be English.
No simultaneous translation will be provided

Poster Session

Poster Session will be visited during coffee & lunch breaks

Certificate of Attendance

A certificate of attendance will be given to all registered participants

Organizing Secretariat

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Note