



2017 Spring Meeting

from May 22 to 26

Strasbourg Convention Centre - France

SYMPOSIUM I

Organic bioelectronics

Symposium Organizers :

Akio YASUDA, SONY Corporation, Stuttgart, Germany

George MALLIARAS, Ecole Nationale Supérieure des Mines, Gardanne, France

Sabine SZUNERITS, University Lille, Villeneuve d'Ascq, France

Wolfgang KNOLL, AIT Austrian Institute of Technology, Vienna, Austria
and CEST Competence Center for Electrochemical Surface Technology,
Wiener Neustadt, Austria

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Monday 22 May 2017

Monday afternoon : Wolfgang Knoll

- 14:00 **Panbio-electronics** I I-1.1
Daniel Simon
Linköping University, Sweden
- 14:30 **Bioelectronics meets Microfluidics: integrated in line sensors at the interface with biology** I I-2.1
Vincenzo F. Curto, Magali Ferro, George Malliaras, Roisin M Owens
Ecole des Mines de Saint-Etienne Department of Bioelectronics (BEL) 880, route de Mimet 13541 Gardanne
- 14:45 **Melanins in bioelectronics: a survey of the role of these natural pigments from bio-interfaces to (opto)electronic devices** I I-3.1
Paola Manini, Valeria Criscuolo, Ludovico Migliaccio, Carmela Tania Prontera, Alessandro Pezzella, Orlando Crescenzi, Marco d'Ischia, Silvia Parisi, Mario Barra, Antonio Cassinese, Pasqualino Maddalena, Maria Grazia Maglione, Paolo Tassini, Carla Minarini
Department of Chemical Sciences, University of Naples «Federico II», Napoli, IT (Paola Manini, VC, LM, CTP, AP, OC, Mdl), Department of Molecular Medicine and Medical Biotechnology, University of Naples "Federico II", Napoli, IT (SP), CNR-SPIN and Department of Physics, University of Naples Federico II, Napoli, IT (MB, AC, PM), Laboratory of Nanomaterials and Devices, ENEA C. R. Portici, Portici, IT (MGM, PT, CM)
- 15:00 **Tailor-Made Organic Semiconductors for Bioelectronic Applications** I I-4.1
Christian Nielsen
Materials Research Institute and School of Biological and Chemical Sciences, Queen Mary University of London, Mile End Road, London E1 4NS, United Kingdom
- 15:15 **Orientation selectivity with organic photodetectors and an organic electrochemical transistor** I I-5.1
Paschalis Gkoupidenis, Shahab Rezaei-Mazinani, Christopher M. Proctor, Esma Ismailova, and George G. Malliaras
Department of Bioelectronics, Ecole Nationale Supérieure des Mines, CMP-EMSE
- 15:30 **Coffe Break**
- 16:00 **Materials for Printed Biodegradable Light-Emitting Devices** I I-6.1
Anthony Morfa, Johannes Zimmermann, Nils Jürgensen, Serpil Tekoglu, Gerardo Hernandez-Sosa
Light Technology Institute, Karlsruhe Institute of Technology, Engesserstraße 13, 76131 Karlsruhe, Germany InnovationLab, Speyererstraße 4, 69115 Heidelberg, Germany
- 16:30 **Physical modelling of bio sensors based on Organic Electrochemical Transistors** I I-8.1
Shirinskaya Anna, Horowitz Gilles, Bonnassieux Yvan
LPICM, CNRS, Ecole Polytechnique, Université Paris Saclay, 91128, Palaiseau, France
- 16:45 **Radiation-sensitive OFET based on the generation of mobile protons and anions in polymeric gate dielectrics** I I-9.1
KATSOGRIDAKIS C.I. 1, KAPETANAKIS E. 2, DOUVAS A.M. 1, PSYCHARIS V. 1, DIMOTIKALI D 3, ARGITIS P. 1, NORMAND P. 1,
1. Demokritos National Centre for Scientific Research, Institute of Nanoscience and Nanotechnology, Athens, Greece, 2. School of Applied Sciences, Technological Educational Institute of Crete, 73133 Chania, Greece, 3. National Technical University of Athens, Department of Chemical Engineering, Athens, Greece,
- 17:00 **Direct electron transfer to cyt c encapsulated within organically-modified silica: Platform to highly efficient biosensors** I I-10.1
Sara López-Bernabeu, Francisco Huerta, Emilia Morallón, Johan Bobacka, Francisco Montilla
Sara López-Bernabeu, Emilia Morallón, Francisco Montilla Instituto Universitario de Materiales de Alicante Universidad de Alicante Francisco Huerta Dpto. de Ingeniería Textil y Papelera Universidad Politécnica de Valencia Johan Bobacka Åbo Akademi University Department of Chemical Engineering Turku, Finland
- 17:15 **All-inkjet-printed flexible Organic Electrochemical Transistors for the detection of biological molecules in liquid media.** I I-11.1
G. Mattana¹, S. Delile¹, L. Fillaud¹, B. Piro¹, V. Noël¹
[1] Université Paris Diderot, Sorbonne Paris Cité, ITODYS, UMR 7086 CNRS, 15 rue J-A de Baïf, 75205 Paris Cedex 13, France
- 17:30 **Conjugated polymers mediate effective activation of the Mammalian Ion Channel Transient Receptor Potential Vanilloid 1** I I-12.1
Francesco Lodola, Guglielmo Lanzani, Maria Rosa Antognazza
Francesco Lodola, Center for Nano Science and Technology, IIT@PoliMi, via Pascoli 70/3, 20133, Milano, Italy, Guglielmo Lanzani, Center for Nano Science and Technology, IIT@PoliMi, via Pascoli 70/3, 20133, Milano, Italy, Politecnico di Milano, Dipartimento di Fisica, Piazza L. Da Vinci 32, 20133, Milano, Italy, Maria Rosa Antognazza, Center for Nano Science and Technology, IIT@PoliMi, via Pascoli 70/3, 20133, Milano, Italy.
- 17:45 **Inexpensive polymer-based Surface Acoustic Wave device with high operating frequency for disposable applications** I I-13.1
Soumya Dutta, Arvind Kumar
Department of Electrical Engineering, IIT Madras, Chennai, India

Tuesday 23 May 2017

Tuesday morning : George Malliaras

- 09:00 Electrical and metabolic cell activity recording by means of an organic device** I I-14.2
Annalisa Bonfiglio
Dept of Electrical and Electronic Engineering, University of Cagliari
- 09:30 Extracellular signal recordings using conducting polymer based electrodes: Driving down the detection limits to nanovolt range** I I-15.2
Pedro M. C. Inácio 1,2, Ana L.G. Mestre 1,2, Sanaz Asgarifar 1,2, Inês M. Araújo 3,4, Fabio Biscarini 5, Maria C. R. Medeiros 6,7 and Henrique L. Gomes 1,2
1 Instituto de Telecomunicações, Av. Rovisco Pais 1, Lisboa, Portugal 2 Universidade do Algarve, Departamento de Eng^a Electrónica e Informática 3 Universidade do Algarve, Departamento de Biomedical Sciences and Medicine, 8005-139 Faro Portugal 4 Centre for Biomedical Research, CBMR, Universidade do Algarve, 8005-139 Faro. 5 Life Science Department, University of Modena and Reggio Emilia, Via Campi 103, I-41125 Modena, Italy. 6 Instituto de Telecomunicações, Universidade de Coimbra, Portugal. 7 Universidade de Coimbra, Departamento de Engenharia Eletrotécnica Computadores, 4, 3030-290 Coimbra, Portugal.
- 09:45 Crystallized Conducting Polymer-Based Electrochemical Transistors with Excellent Water Stability and Electrical Performance** I I-16.2
Myung-Han Yoon, Seongmin Kim
School of Materials Science and Engineering Gwangju Institute of Science and Technology
- 10:00 Organic electrochemical transistor as a tool for monitoring toxic agents effects on in vitro cell tissue** I I-17.2
Marta Tessarolo 1-2, Francesco Decataldo 2, Vito Vurro 2, Marianna Barbalinardo 3, Denis Gentili 3, Francesco Valle 3, Massimiliano Cavallini 3, Beatrice Fraboni 2
1 Interdepartmental Centre for Industrial Research – Advanced Mechanics and Materials (CIRI – MAM), University of Bologna, Bologna, Italy, 2 Department of Physics and Astronomy, University of Bologna, Bologna, Italy, 3 National Research Council (CNR), Institute for the Study of Nanostructured Materials (ISMN) Bologna, Italy,
- 10:15 Organic Cell Stimulating and Sensing transistor architecture for the study of neural cells** I I-18.2
Michele Muccini¹, Stefano Toffanin¹ and Valentina Benfenati²
1 CNR-ISMN, Istituto per lo Studio dei Materiali Nanostrutturati, Consiglio Nazionale delle Ricerche 2 CNR-ISOF, Istituto per la Sintesi Organica e la Fotoreattività, Consiglio Nazionale delle Ricerche Via P. Gobetti 101, 40129 Bologna, Italy
- 10:30 Coffe Break**
- 11:00 Nanopatterned conducting polymers for low impedance contacts and cell guidance** I I-19.2
Mohammed ElMahmoudy, Adel Hama, Vincenzo Curto, George G. Malliaras, and Sébastien Sanaur
Department of Bioelectronics, Ecole Nationale Supérieure des Mines de Saint-Etienne, 13541 Gardanne, France, Department of Flexible Electronics, Ecole Nationale Supérieure des Mines de Saint-Etienne, 13541 Gardanne, France
- 11:15 EGFET-based aptasensors for ultra-sensitive detection of biorecognition events** I I-20.2
Carlo A. Bortolotti, Marcello Berto, Chiara Diacci, Michele Di Lauro, Simone L. Marasso, Matteo Cocuzza, Denis Perrone, Andrea Cossarizza, Elena Bianchini, Marcello Pinti, Candido F. Pirri, Magnus Berggren, Daniel Simon, Fabio Biscarini
Dipartimento di Scienze della Vita, Università di Modena e Reggio Emilia, Modena, Italy (Bortolotti, Berto, Diacci, Di Lauro, Pinti, Biscarini), Dipartimento di Scienza Applicata e Tecnologia, Politecnico di Torino, Torino, Italy (Marasso, Cocuzza), Istituto Italiano di Tecnologia, Center for Sustainable Futures, Torino, Italy (Perrone, Pirri), Dipartimento di Scienze Mediche e Chirurgiche Materno-Infantili e dell'Adulto, Università di Modena e Reggio Emilia, Modena, Italy (Cossarizza, Bianchini), Laboratory of Organic Electronics, Department of Science and Technology, Linköping University, Norrköping, Sweden (Berggren, Simon)
- 11:30 Modelling of conducting polymer/electrolyte interface for extracellular signal recordings** I I-21.2
João Reis, Pedro M. C. Inácio, Ana L.G. Mestre, Maria C. R. de Medeiros and, Henrique L. Gomes
Instituto de Telecomunicações - Pólo de Coimbra, Instituto de Telecomunicações - Pólo de Lisboa, Instituto de Telecomunicações - Pólo de Lisboa, Instituto de Telecomunicações - Pólo de Coimbra, Department of Electrical and Computer Engineering, University of Coimbra, Instituto de Telecomunicações - Pólo de Lisboa, University of Algarve

- 11:45 The utilization of divinylsulfone as an effective cross-linker for PEDOT:PSS using low temperatures** I I-22.2
Daniele Mantione a, Isabel del Agua a, b, Ilke Uguz b, Mohammed ElMahmoudy b, Ana Sanchez-Sanchez a, Haritz Sardona a, George G. Malliaras b, David Mecerreyes a, c
a POLYMAT University of the Basque Country UPV/EHU, Joxe Mari Korta Center, Avda. Tolosa 72, 20018 Donostia-san Sebastian, Spain b Department of Bioelectronics, Ecole Nationale Supérieure des Mines, CMP-EMSE, MOC, 13541 Gardanne, France c Ikerbasque, Basque Foundation for Science, E-48011 Bilbao, Spain

12:00 Lunch

Poster Session

- 13:00 Direct and selective detection of bacteria using surface-enhanced Raman Scattering (SERS) imaging** I P-12.3
Cristina-Cassiana Andrei¹, Anne Chantal Gouget-Laemmel¹, Anne Moraillon¹, Rabah Boukherroub², François Ozanam¹ and Sabine Szunerits²
1 Physique de la Matière Condensée, Ecole Polytechnique-CNRS, Université Paris Saclay, 91128 Palaiseau, France 2 Univ. Lille, CNRS, Centrale Lille, ISEN, Univ. Valenciennes, UMR 8520 - IEMN, F-59000 Lille, France
- 13:00 Flexible polyimide electrodes for ECoG in chicken embryos** I P-13.3
Siriana Paonessa, Francesco Pieri, Stefano Di Pascoli
All authors at: University of Pisa, Dipartimento Ingegneria della Informazione.
- 13:00 The impact of pH variations on the transport efficiency of Organic Electronic Ion Pumps** I P-1.3
M. Seitanidou, JF. Franco-Gonzalez, D. Simon, M. Berggren
Laboratory of Organic Electronics, Department of Science and Technology, Linköping University, 60174 Norrköping, Sweden
- 13:00 Designing microfluidic platform detection chamber for cancer cells label free detection Lab-on-a-chip** I P-2.3
Catalin Marculescu¹, Vasilica Tureceanu^{1,2}, Andrei Marius Avram¹, Tiberiu Burinaru^{1,3}, Bianca Tincu¹, Marioara Avram¹
1 National Institute for Research and Development in Microtechnologies, Romania 2 Department of Materials Science, Transilvania University of Brasov, Romania 3 Faculty of Veterinary Medicine, USAMVB, Romania
- 13:00 DNA sensor on sapphire substrate polypyrrole chip** I P-3.3
V. Blashuk, O. Ivanyuta, S. Kratko
Taras Shevchenko National University of Kyiv 64/13, Volodymyrska Str., Kyiv, 01601, Ukraine
- 13:00 Injectable, self-opening, and freestanding retinal prosthesis for fighting blindness made of conjugated polymers** I P-4.3
Marta Airaghi Leccardi (1), Laura Ferlauto (1), Kevin Sivula (2), Diego Ghezzi (1) (1) Medtronic Chair in Neuroengineering, Center for Neuroprosthetics, Interfaculty Institute of Bioengineering, School of Engineering, École Polytechnique Fédérale de Lausanne, Switzerland (2) Laboratory for Molecular Engineering of Optoelectronic Nanomaterials, Institute of Chemical Sciences and Engineering, School of Basic Science, École Polytechnique Fédérale de Lausanne, Switzerland
- 13:00 A Medical Emergency Alert and Warning Wrist Band based on Photoplethysmography with Color Adaption Feature** I P-5.3
Hikmet Hakan Gurel, Sairam Vakkalanka, Ranjith Engu Kocaeli University, Technology Faculty, Department of Information Systems Engineering, Kocaeli, Turkey, Department of Computer Science and Engineering Baba Institute of Technology and Sciences Andhra Pradesh, Vizag, India, Human Resources Hays Stockholm, Sweden
- 13:00 3D multi-layer probe for application in neuroprosthetics** I P-6.3
Marta Airaghi Leccardi, Vivien Gaillet, Bastien Duckert, Diego Ghezzi
Medtronic Chair in Neuroengineering, Center for Neuroprosthetics, Interfaculty Institute of Bioengineering, School of Engineering, École Polytechnique Fédérale de Lausanne, Switzerland
- 13:00 A 3D model for bone tissue engineering** I P-7.3
Donata Iandolo, [a] Magali Ferro, [a] Charalampos Pitsalidis, [a] Sahika Inal, [b] Adel Hama, [a] Roisin Owens [a]
[a] Department of Bioelectronics, Centre Microélectronique de Provence, Gardanne, France. [b] Biological and Environmental Science and Engineering Division, KAUST, Saudi Arabia.

<p>13:00 Towards reliable electronic biosensors: Using a graphene-based liquid-gated field-effect transistor platform for label-free DNA Johannes Bintinger(1,2,5), Teresa Berninger(1), Andrea Rozzi(1,3), Paolo Rudatis(4), Natalia Yelavik(5), Roberto Corradini(3), Dominik Eder(4), Hannes Mikula(5), Wolfgang Knoll(1,2) 1, Austrian Institute of Technology, Biosensor Technologies, Muthgasse 11, 1190 Vienna, Austria 2, Center for Electrochemical Surface Technologies, Viktor Kalpan Strasse 22, 2700 Wr. Neustadt, Austria 3, University of Parma, Dipartimento di Scienze Chimiche, della Vita e della Sostenibilità Ambientale- Università di Parma, Parco Area delle Scienze 17/A, 43100 Parma, Italy 4, Vienna University of Technology, Institute of Materials Chemistry, Getreidemarkt 9, 1060 Vienna, Austria 5, Vienna University of Technology, Institute of Applied Synthetic Chemistry, Getreidemarkt 9, 1060 Vienna, Austria</p>	<p>I P-8.3</p>	<p>15:45 Graphene FETs and Plasmonic Optics for sensing Patrik Aspermaier (1,2), Johannes Bintinger (2), Rabah Boukherroub (1), Wolfgang Knoll (2), Sabine Szunerits (1) (1) Univ. Lille, CNRS, Centrale Lille, ISEN, Univ. Valenciennes, UMR 8520 - IEMN, F-59000 Lille, France, (2) Austrian Institute of Technology, Biosensor Technologies, Muthgasse 11, 1190 Vienna, Austria</p>	<p>I I-27.4</p>
<p>13:00 High performance electrolyte-gated field-effect transistors processed by a solution shearing technique Francesca Leonardi, Qiaoming Zhang, Stefano Casalini, Inés Temiño, Sergi Galindo, Marta Mas-Torrent Institut de Ciència de Materials de Barcelona (ICMAB-CSIC) and CIBER-BBN, Campus de la UAB, 08193, Bellaterra, Spain</p>	<p>I P-9.3</p>	<p>16:00 Detection of bacteria by analysis in spectroscopy of absorbance or fluorescence of volatile metabolites trapped by functionalize Emilie PERRET, Marjorie VRINAUD, Pierre R. MARCOUX, Jean HUE, Isabelle TEXIER-NOGUES CEA-Leti, DTBS, GRENOBLE, France</p>	<p>I I-28.4</p>
<p>13:00 Highly Sensitive Nano-Biosensor with DNA-Templated Conductive Nanowires Hyung Jin Kim¹, Jong Seob Choi¹, and Byungyou Hong² 1 Convergence Medical Device Research Center, Gumi Electronics and Information Technology Research Institute, Gumi 730-701, Republic of Korea 2 College of Information and Communication Engineering, Sungkyunkwan University, Suwon 440-746, Republic of Korea</p>	<p>I P-10.3</p>	<p>16:15 Coffee Break</p> <p>16:45 Ultra-sensitive bio-markers detection with an electrolyte gated organic transistor Eleonora Macchia,¹ Amber Tiwari,¹ Kyriaki Manoli,¹ Brigitte Holzer,¹ Cinzia Di Franco,² Matteo Ghittorelli,³ Fabrizio Torricelli,³ Giuseppe Felice Mangiatordi,⁴ Gaetano Scamarcio,^{2,5} Gerardo Palazzo^{1,6} and Luisa Torsi^{1*} 1 Dipartimento di Chimica - Università degli Studi di Bari "Aldo Moro" - Bari (I) 2 CNR - Istituto di Fotonica e Nanotecnologie, Sede di Bari (I) 3 Dipartimento Ingegneria dell'Informazione - Università degli Studi di Brescia - Brescia (I) 4 Dipartimento di Farmacia - Scienze del Farmaco - Università degli Studi di Bari "Aldo Moro" - Bari (I) 5 Dipartimento di Fisica "M. Merlin" - Università degli Studi di Bari - "Aldo Moro" - Bari (I) 6CSGI (Center for Colloid and Surface Science) - Bari (I)</p>	<p>I I-29.4</p>
<p>13:00 Body energy harvesting and conversion for backup electronic power supplies George Claudiu Zarnescu, Stamatina Ioan University of Bucharest, Faculty of Physics, 3NanoSAE Reseach Center</p>	<p>I P-11.3</p>	<p>17:00 Correlation between thin-film 3D growth modality and mobility in high performance n-type molecular water-gated OFETs Federico Prescimone, Emilia Benvenuti, Marco Natali, Andrea Lorenzoni, Zhihua Chen, Franco Dinelli, Fabiola Liscio, Silvia Milita, Francesco Mercuri, Michele Muccini, Antonio Facchetti, Stefano Toffanin Federico Prescimone Istituto per lo Studio dei Materiali Nanostrutturati (ISMN) - Consiglio Nazionale delle Ricerche (CNR), Bologna, Italy, Emilia Benvenuti Istituto per lo Studio dei Materiali Nanostrutturati (ISMN) - Consiglio Nazionale delle Ricerche (CNR), Bologna, Italy, Marco Natali Istituto per lo Studio dei Materiali Nanostrutturati (ISMN) - Consiglio Nazionale delle Ricerche (CNR), Bologna, Italy, Andrea Lorenzoni Istituto per lo Studio dei Materiali Nanostrutturati (ISMN) - Consiglio Nazionale delle Ricerche (CNR), Bologna, Italy, Zhihua Chen Northwestern University Evanston, IL 60208-3113 (USA), Franco Dinelli Istituto Nazionale di Ottica (INO) - Consiglio Nazionale delle Ricerche (CNR), Pisa, Italy, Fabiola Liscio Istituto per la Microscopia e i Microsistemi (IMM) - Consiglio Nazionale delle Ricerche (CNR), Bologna, Italy, Silvia Milita Istituto per la Microscopia e i Microsistemi (IMM) - Consiglio Nazionale delle Ricerche (CNR), Bologna, Italy, Francesco Mercuri Istituto per lo Studio dei Materiali Nanostrutturati (ISMN) - Consiglio Nazionale delle Ricerche (CNR), Bologna, Italy, Michele Muccini Istituto per lo Studio dei Materiali Nanostrutturati (ISMN) - Consiglio Nazionale delle Ricerche (CNR), Bologna, Italy, Antonio Facchetti Northwestern University Evanston, IL 60208-3113 (USA), Stefano Toffanin Istituto per lo Studio dei Materiali Nanostrutturati (ISMN) - Consiglio Nazionale delle Ricerche (CNR), Bologna, Italy.</p>	<p>I I-30.4</p>
<p>13:00 Smart sensor tags: a flexible RFID device integrated with a freshness evaluation sensor for food safety S.-M. Iordache(1*), S. Caramizoiu(2), A.-M. Iordache(1*), V. Garleanu(1), I. Stamatina(1) (1) 3Nano-SAE Research Center, Faculty of Physics, University of Bucharest, 405 Atomistilor Str., Magurele, 077125, Romania (2) OPTOELECTRONICA 2001 S.A., 409 Atomistilor Str., Măgurele, 077125, Romania. * corresponding authors</p>	<p>I P-14.3</p>	<p>17:15 Novel light-responsive biocompatible hydrogels produced by initiated Chemical Vapor Deposition Anna Maria Coclite Institute of Solid State Physics, Graz University of Technology, Graz, Austria</p> <p>17:30 The influence of side chain engineering on the performance of n-type polymers in organic electrochemical transistors (OECTs) Alexander Giovannitti(1), Anna-Maria Pappa(2), Sahika Inal (2,5), Roisin Owens(2), George G. Malliaras(2), Jonathan Rivnay(3,4), Iain McCulloch(1,5) (1) Department of Chemistry and Centre for Plastic Electronics, Imperial College London, London SW7 2AZ, United Kingdom. (2) Department of Bioelectronics, École Nationale Supérieure des Mines, CMP-EMSE, MOC Gardanne, 13541, France. (3) Palo Alto Research Center, Palo Alto, CA 94304, USA. (4) Northwestern University, 2145 Sheridan Road, Evanston, IL 60208-3109. (5) King Abdullah University of Science and Technology, SPERC, Thuwal 23955-6900, Saudi Arabia.</p>	<p>I I-31.4</p>
<p>13:00 A non-enzymatic electrochemical sensor based on porphyrins for histamine evaluation S.-M. Iordache(1*), A. M. Iordache(1*), V.Garleanu(1), S.Caramizoiu(2), E. Fagadar-Cosma(3), I.Stamatina(1) (1) 3Nano-SAE Research Center, Faculty of Physics, University of Bucharest, 405 Atomistilor Str., Magurele, 077125, Romania (2) OPTOELECTRONICA 2001 S.A., 409 Atomistilor Str., Măgurele, 077125, Romania. (3) Institute of Chemistry Timisoara of Romanian Academy, M. Viteazul Ave. 24, 300223-Timisoara, Romania * corresponding authors</p>	<p>I P-15.3</p>	<p>19:30 Dinner with invited speakers</p>	<p>I I-32.4</p>
<p>Tuesday afternoon : Sabine Szunerits</p>			
<p>14:30 Organic Bioelectronics for Medicine Luke Lee Pyung-Se National University of Singapore, Singapore</p>	<p>I I-23.4</p>		
<p>15:00 An optical bio-sniffer for exhaled acetone as a potential biomarker of lipid metabolism Po-Jen Chien, Ming Ye, Masato Tsujii, Takuma Suzuki, Koji Toma, Takahiro Arakawa, Kohji Mitsubayashi Institute of Biomaterials and Bioengineering, Tokyo Medical and Dental University</p>	<p>I I-24.4</p>		
<p>15:15 Carbon-based Flexible Sensing Electronics for Health Monitoring Xuwen Wang, Ting Zhang, Zheng Liu School of Materials Science and Engineering, Nanyang Technological University, Singapore.</p>	<p>I I-25.4</p>		
<p>15:30 Engineering rapid and sensitive semiconductor-based diagnostic technologies for malaria K. S. Malpartida, L. S. Yu, M. Delves, J. Rodriguez-Manzano, P. Georgiou, J. Baum Department of Chemistry Imperial College London, Department of Electrical and Electronic Engineering Imperial College London, Department of Life Sciences Imperial College London, Department of Electrical and Electronic Engineering Imperial College London, Department of Electrical and Electronic Engineering Imperial College London, Department of Life Sciences Imperial College London</p>	<p>I I-26.4</p>		

Wednesday morning : Akio Yasuda

- 09:00 Skin-Inspired Pressure Sensors and Applications** I I-33.5
 Zhenan Bao
 Department of Chemical Engineering, and by courtesy Chemistry, Material Science and Engineering Stanford University
- 09:30 All PEDOT:PSS Organic Electrochemical Transistor for the selective detection of dopamine** I I-34.5
 Marta Tessarolo, Isacco Gualandi, Erika Scavetta, Marco Marzocchi, Beatrice Fraboni
 Department of Physics and Astronomy, University of Bologna, Bologna, Italy
 Interdepartmental Centre for Industrial Research – Advanced Mechanics and Materials (CIRI – MAM), University of Bologna, Bologna, Italy Department of Industrial Chemistry «Toso Montanari», University of Bologna, Bologna, Italy
- 09:45 Flexible Sensors with Stretchable PEDOT:PSS Electrodes** I I-35.5
 Hidenori Okuzaki, Takahiro Kondo, Masaki Sato
 Graduate Faculty of Interdisciplinary Research, University of Yamanashi
- 10:00 Ultra-Flexible yet Robust Nonlinear Framework for Zero-Gap Design on Biointerface** I I-36.5
 Junsoo Kim, Sol Yee Im, Jung Yoon Kwon, Jaewoo Lee, Jong Pil Im, Seung-Min Lee, Seung Eon Moon*
 ICT Materials Research Group, Electronics and Telecommunications Research Institute, Daejeon 34129, Republic of Korea
- 10:15 Printable Carbon Nanotubes & Graphene Conducting Elastomers for Wearable Biomechanical Sensor** I I-37.5
 Hin Chun Yau, Hannah Leese, Milo Shaffer,
 Department of Chemistry and Materials, Imperial College London, South Kensington Campus, London, SW7 2AZ, UK
- 10:30 Coffee Break**
- 11:00 On the transient response of organic electrochemical transistors** I I-38.5
 Gregorio Couto Faria, Duc Trong Duong, Alberto Salleo
 Gregorio Couto Faria São Carlos Physics Institute, University of São Paulo, PO. Box: 369, 13560-970, São Carlos, SP, Brazil Duc Trong Duong, Alberto Salleo Department of Materials Science and Engineering, Stanford University, Stanford, California 94305, USA
- 11:15 New process for a fully stretchable Organic Electrochemical Transistor** I I-39.5
 Bastien MARCHIORI, Roger DELATTRE, Marc RAMUZ
 Department of Flexible Electronics, Ecole Nationale Supérieure des Mines, Centre Microélectronique de Provence CMP-EMSE, F-13541 Gardanne, France
- 11:30 A 24 um-pitch Microelectrode Array with 6912-channel Readout at 12 kHz by Highly Scalable Implementation.** I I-41.5
 Jun Ogi1, Yuri Kato1, Yoshihisa Matoba1, Chigusa Yamane1, Kazunori Nagahata1, Yusaku Nakashima2, Takuya Kishimoto2, Shigeki Hashimoto2, Koichi Maari3, Yusuke Oike1, and Takayuki Ezaki1
 1 Research Division, Sony Semiconductor Solutions Corporation, Kanagawa, Japan, 2 Bio-Medical Research and Development Division, R&D Platform, Sony Corporation, Tokyo, Japan, 3 Sony Semiconductor Solutions Corporation, Kanagawa, Japan
- 11:45 Surface enhanced Raman scattering for direct ex-vivo diagnostic in comparative medicine** I I-40.5
 C. Rizea1, I.A. Birtoiu2, L.O. Scoicaru3, M.I. Rusu3, C. R. Iordanescu3, B. A. Vitalaru2, M. V. Udrea4, B. Chiricutaa4, L. Braic3, A. Parau3, M. Tautan3, A. Tonetto5, R. Notonier5
 1.ROXY VETERINARY S.R.L. Magurele, Romania, 2. Faculty of Veterinary Medicine-University of Agronomic Sciences and Veterinary Medicine, Bucharest, Romania, 3. National Institute of Research and Development for Optoelectronics INOE 2000, Magurele, Romania, 4. APEL LASER S.R.L., Bucharest, Romania, 5. Aix-Marseille Université, Centrale Marseille, CNRS, Federation Sciences Chimiques Marseille (FR 1739) - PRATIM, Marseille, France
- 12:00 Fluidic Reservoir Ion Pump Probes for Controlling Epileptiform Activity** I I-42.5
 Christopher M. Proctor, Adam Williamson, Anna Maria Pappa, Vincenzo Curto, Ilke Uguz, Christophe Bernard, George Malliaras
 Proctor, Pappa, Uguz, Malliaras Department of Bioelectronics Ecole Nationale Supérieure des Mines CMP-EMSE, MOC 13541 Gardanne, France E-mail: Malliaras@emse.fr Williamson, Bernard Aix Marseille Université INS, 13005 Marseille, France, Inserm UMR_S 1106, 13005 Marseille, France

- 12:15 Fabrication of efficient electronic junction between photosynthetic reaction center protein and metals, polymer and solid semiconductors** I I-43.1
 Hani Barhum, Chanoch Carmeli, Itai Carmeli
 Tel Aviv University and Bar Ilan University Israel

Thursday 25 May 2017

12:30 Lunch

16:15 Plenary Session