



BIOSENSORS

Eleventh International Workshop
03 – 05 October 2024 / Marrakech, Morocco



Program

**The Eleventh International Workshop
on Biosensors**

**03 – 05 October 2024
Marrakech, Morocco**

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03 – 05 October 2024
08:30 - 18:00



Marrakech, Morocco

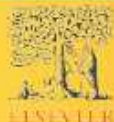


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Eleventh International Workshop on Biosensor 2024

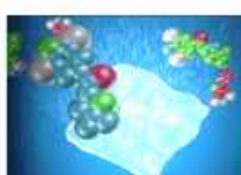
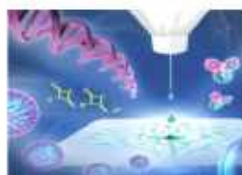
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Workshop
Marrakech
2024
Biosensors



 **PalmSens**

U2FST
FACULTÉ DES SCIENCES ET TECHNOLOGIES
DE MARRAKECH
UNIVERSITÉ HASSAN II DE FAKRAJ ALMA



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G. Palleschi (Italy)

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Y. Korpan (Ukraine)
N. Rozlosnik (Denmark)
O. Fatibello-Filho (Brazil)
Genxi Li (China)
W. Schumann (Germany)
K. Sode (Japan)

TOPICS :

-ELECTROCHEMICAL BIOSENSORS
-OPTICAL BIOSENSORS
-NANOBIOSENSORS & NANOMATERIALS
-LABEL-FREE BIOSENSORS
-NUCLEIC ACID SENSORS AND APTASENSORS
-ENZYME-BASED BIOSENSORS
-IMMUNOSENSORS
-WEARABLE BIOSENSORS

-MOLECULARLY IMPRINTED POLYMERS BASED BIOSENSORS
-WHOLE CELL-BASED BIOSENSORS
-NATURAL & SYNTHETIC RECEPTORS
-PRINTED BIOSENSORS AND MICROFABRICATION
-MICROFLUIDICS
-COMMERCIAL BIOSENSORS

*Professor Aziz Amine

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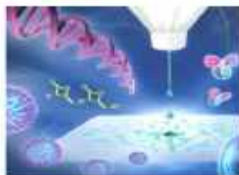
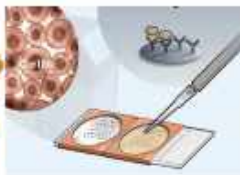


SCIENTIFIC PROGRAM

Thursday October 3 rd , 2024	
08h15-09h00	Registration
09h00-09h15	Opening
Chair: C. M.A. Brett	
09h15-10h00	PL1: J. Bobacka
10h00-10h30	KN1: A. Errachid
10h30-11h00	Coffee Break and Poster Session
Chair: E. Iwuoha	
11h00-11h30	KN2: V. Bansal
11h30-12h00	KN3: E. Dempsey
12h00-12h30	OC1-OC2
12h30-14h00	Lunch
Chair: G. Palleschi	
14h00-14h45	PL2: A. Merkoçi
14h45-15h15	KN4: E. Iwuoha
15h15-16h00	OC3-OC5
16h00-16h20	Poster Communication (PO1-PO10)
16h20-16h45	Coffee Break and Poster Session
Chair: D. Moscone	
16h45-18h45	OC6-OC13

Friday October 4 th , 2024	
Chair: A. Errachid	
08H30-09H15	PL3: K. Haupt
09H15-09H45	KN5: C. Mao
09H45-10H15	OC14-OC15
10h15-10h35	Poster Communication (PO11-PO21)
10h35-11h00	Coffee Break and Poster Session
Chair: J. Bobacka	
11h00-13h00	OC16-OC23
13h00-14h15	Lunch
Chairs: G. Palleschi/ C. M.A. Brett	
14h15-14h45	KN6: K. Sode
14h45-15h15	KN7: P. Chen
15h15-15h45	OC24-OC25
15h45-16h15	Coffee Break and Poster Session
Chair: E. Dempsey	
16h15-17h00	OC26-OC28
17h00-17h30	Meeting with Editors
19H30-23H30 GALA DINNER	

Saturday October 5 th , 2024	
Chair: S. Cosnier	
08h30-09h00	KN8: F. Arduini
09h00-10h15	OC29-OC33
10h15-11h00	Coffee Break and Poster Session
Chair: A.M. Oliveira-Brett	
11h00-12h00	OC34-OC37
12h00-12h15	Closing (Amine, Brett, and Palleschi)
12h15-14h00	Lunch
14h00-19h00 EXCURSION	
PL: Plenary conference (45min) KN: Key-note (30min) OC: Oral Communication (15min) PO: Poster Communication (2min)	



Plenary Conferences

PL1: JOHAN BOBACKA

WEARABLE CHEMICAL SENSORS AND BIOSENSORS FOR NON-INVASIVE ON-BODY MONITORING

J. Bobacka^{1,2}, Z.A. Boeva², A. García Pérez², E. Haeggström^{2,3}

¹ Åbo Akademi University, Faculty of Science and Engineering, Laboratory of Molecular Science and Engineering, Henriksgatan 2, 20500 Turku/Åbo, Finland.

² GlucoModicum Ltd, Toinen Linja 7, 00530 Helsinki, Finland.

³ University of Helsinki, Department of Physics, Gustaf Hållströmin katu 2, 00560 Helsinki, Finland.

PL2: ARBEN MERKOÇI

ADVANCING SUSTAINABLE NANOBIOSENSORS FOR DIAGNOSTIC APPLICATIONS: INNOVATIONS AND IMPLICATIONS

Catalan Institute of Nanoscience and Nanotechnology (ICN2), CSIC and The Barcelona Institute of Science and Technology, Campus UAB, Bellaterra, 08193 Barcelona, Spain.

PL3: KARSTEN HAUPT

MOLECULARLY IMPRINTED POLYMER NANOGELS: SYNTHETIC PEPTIDE ANTIBODIES FOR BIOMEDICAL DIAGNOSTICS AND THERAPY

¹ Université de Technologie de Compiègne, CNRS Lab for Enzyme and Cell Engineering, Compiègne, France

² Institut Universitaire de France.

Keynote lectures

KN1: ABDELHAMID ERRACHID

A 3D-PRINTED AUTOMATED SAMPLE STORAGE UNIT FOR SPORADIC SAMPLING IN INACCESSIBLE AQUATIC ENVIRONMENT

N. Zine and A. Errachid

Université Claude Bernard Lyon 1, ISA, UMR 5280, CNRS, 5 rue de la Doua, 69100 Villeurbanne, France.

KN2: VIPUL BANSAL

NANOZYMES FOR NEXT-GENERATION DIAGNOSTIC AND THERAPEUTIC APPLICATIONS

Sir Ian Potter NanoBioSensing Facility, NanoBiotechnology Research Laboratory, School of Science, RMIT University, Melbourne, VIC 3000, Australia

KN3: EITHNE DEMPSEY

SOLUTIONS AND STRATEGIES FOR SMALL MOLECULE SENSING AND ENVIRONMENTAL MONITORING

Yiran Luo, Tara Barwa, Vanessa Mokwebo, Tony O'Hara, Simon Egan, Baljit Singh, Carmen Negredo, Eoghain Murphy, Saurav K. Guin, Eithne Dempsey
Department of Chemistry, Kathleen Lonsdale Institute for Human Health Research, Maynooth University, Maynooth, Co. Kildare, Ireland.

KN4: EMMANUEL IWUOHA

KESTERITE-FUNCTIONALISED ELECTROCHEMICAL APTASENSORS FOR DISEASE BIOMARKERS TOWARD SUSTAINABLE DIAGNOSTIC SENSING

Emmanuel Iwuoha, Onyinyechi Uhuo, Kaylin Januarie, Marlon Oranzie, Jaymi January

Sensor Laboratories (SensorLab), University of the Western Cape, Bellville, Cape Town, South Africa

KN5: CHUANBIN MAO

PHAGE-BASED ULTRASENSITIVE DETECTION OF BIOMARKERS

Department of Biomedical Engineering, The Chinese University of Hong Kong

KN6: KOJI SODE

CHALLENGES AND OPPORTUNITIES TO REALIZE BIOSENSORS FOR IN VIVO CONTINUOUS MONITORING OF PEPTIDES AND PROTEINS

Department of Biomedical Engineering, University of North Carolina Chapel Hill and North Carolina State University, Chapel Hill, NC 27599

KN7: PENG CHEN

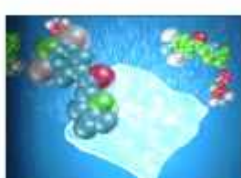
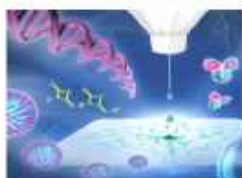
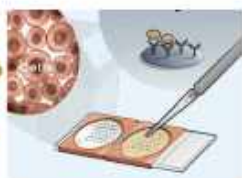
TRANSDERMAL DIAGNOSTICS BASED ON MICRONEEDLE PATCHES

Nanyang Technological University (Singapore)

KN8: FABIANA ARDUINI

ELECTROCHEMICAL PAPER-BASED ELECTROCHEMICAL (BIO)SENSORS FOR THE NEXT GENERATION OF ANALYTICAL TOOLS

Department of Chemical Science and Technologies, University of Rome Tor Vergata Via della Ricerca Scientifica, Rome, Italy.



Oral communications

OC 1 : FLAVIO DELLA PELLE

LASER PLOTTER-BASED STRATEGIES FOR BIOSENSORS AND PAPER-BASED ELECTROANALYTICAL DEVICE DEVELOPMENT

Flavio F. Della Pelle¹, A. Scroccarello¹, F. Silveri¹, D. Paolini¹, S. Fiori¹, Ida Valerio Di Cristoforo¹, D. Compagnone¹

¹Department of Bioscience and Technology for Food, Agriculture and Environment, University of Teramo, Campus "Aurelio Saliceti" Via R. Balzarini 1, 64100 Teramo, Italy.

OC 2 : ANNALISA SCROCCARELLO

METAL NANOPARTICLES LASER-WRITING ON CELLULOSIC SUBSTRATES FOR COLORIMETRIC PAPER-BASED ANALYTICAL DEVICE DEVELOPMENT

A. Scroccarello¹, F. Della Pelle¹, P. Di Battista¹, S. Fiori¹, D. Compagnone¹.

¹ Department of Bioscience and Technology for Food, Agriculture and Environment, Via Renato Balzarini 1 Teramo, Italy,

OC 3 : DOUNIA ELFADIL

LASER-PLOTTER MANUFACTURED COLORIMETRIC FOUR-LEAF CLOVER-LIKE MIP/PAD FOR MALEIC HYDRAZIDE DETECTION

D. Elfadil¹, A. Scroccarello¹, F. Della Pelle¹, P. Di Battista¹, A. Amine², D. Compagnone¹

¹ Department of Bioscience and Technology for Food, Agriculture and Environment, Via Renato Balzarini, 1, Teramo, Italy, e-mail: delfadil@unite.it

² Laboratory of Process Engineering & Environment, Faculty of Sciences and Technology, Hassan II University of Casablanca, Mohammedia, B.P.146, Morocco

OC 4 : JOHANA STRMISKOVA

ELECTROCHEMICAL BIOASSAY FOR DETECTION OF HUMAN PAPILLOMAVIRUS ONCOGENIC ACTIVITY

J. Strmiskova^{a,b}, N. Izadi^a, M. Anton^c, L. Moranova^a, and M. Bartosik^a

^a Research Centre for Applied Molecular Oncology, Masaryk Memorial Cancer Institute, Zluty kopec 7, 656 53 Brno, Czech Republic

^b National Centre for Biomolecular Research, Faculty of Science, Masaryk University, Kamenice 5, 625 00 Brno, Czech Republic

^c Dept. Obstet. Gynecol., Univ. Hosp. Brno, and Medical Faculty Masaryk University, Obilni trh 11, 602 00 Brno, Czech Republic

OC 5 : LUDMILA MORANOVA

BIOELECTROCHEMICAL DETECTION OF CANCER BIOMARKERS

Ludmila Moranova¹, Johana Strmiskova¹, Nasim Izadi¹, Ravery Sebuyoya¹, Martin Bartosik¹

Research Centre for Applied Molecular Oncology, Masaryk Memorial Cancer Institute, Zluty kopec 7, 656 53, Brno, Czech Republic.

OC 6 : SELMA BLOOM BELFAKIR

NANOBODY-BASED DIAGNOSTIC TOOLS FOR TOXIN DETECTION

Belfakir, S.B.^{1,2}, Svendsen, W.E.², Laustsen-Kiel, A.H.^{1,2} & Ross, G.M.S¹

¹ VenomAid Diagnostics, Denmark

² Department of Biotechnology and Biomedicine, Technical University of Denmark, Denmark

OC 07: BOGDAN BUCUR

NEUROTOXIC COMPOUNDS SCREENING USING BIOSENSOR WITH CO-IMMOBILIZED ACETYLCHOLINESTERASE AND BUTYRYLCHOLINESTERASE ON ELECTRODES MODIFIED WITH CUNPS AND STABILIZED PRUSSIAN BLUE

Madalina-Petruta Bucur¹, Maria-Cristina Radulescu¹, Bogdan Bucur^{1*}, Adela Teban-Man^{2,3}, Maria D. Nicoară^{2,3}, Horia L. Banciu³ and Gabriel Lucian Radu¹

¹ National Institute of Research and Development for Biological Sciences, Centre of Bioanalysis, 296, Splaiul Independentei, 060031 Bucharest, Romania

² Institute of Biological Research Cluj, NIRDBS, 48 Republicii Street, 400015 Cluj-Napoca, Romania

³ Department of Molecular Biology and Biotechnology, Faculty of Biology and Geology, "Babeş-Bolyai" University, 5-7 Clinicilor Street, 400006 Cluj-Napoca, Romania

OC 08: VALERIA NOCERINO

A HYDROGEL NANOCOMPOSITE IMMUNOSENSOR FOR THE ELECTROCHEMICAL DETECTION OF HEMOGLOBIN

Valeria Nocerino^{1,2}, Bruno Miranda¹, Principia Dardano¹, Sara Colella³, Vincenzo Vedi³, Amina Antonacci³, Vincenzo Mazzaracchio⁴, Fabiana Arduini^{4,5}, Luca De Stefano^{1*}, Viviana Scognamiglio³

¹ Institute of Applied Sciences and Intelligent Systems, National Research Council, Via Pietro Castellino 111, 80131 Naples, Italy

² Department of Engineering (DI), University of Naples Parthenope, Centro Direzionale Isola (C4), 80134, Naples, Italy

³ Institute of Crystallography, National Research Council, Via Salaria Km 29.3, 00015 Monterotondo Scalo, Rome, Italy

⁴ University of Rome "Tor Vergata", Department of Chemical Science and Technologies, Via della Ricerca Scientifica, 00133 Rome, Italy

⁵ SENSE4MED, via Renato Rascel 30, 00128 Rome, Italy

OC 09: GIULIA FICHERA / PAOLA CICATIELLO

VERSATILE CHIMERIC PROTEINS FOR IMMUNO-BIOSENSORS DEVELOPMENT

G. Fichera, R. Pitocchi, P. Cicatiello, P. Giardina, A. Piscitelli

University of Naples "Federico II" Department of Chemical Sciences

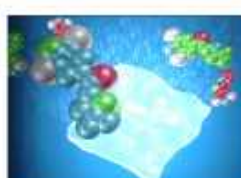
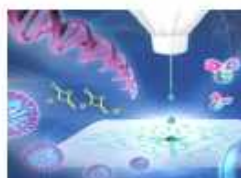
OC 10: TINA D'APONTE

HIGHLY SENSITIVE IMPEDIMETRIC BIOSENSOR FOR ENVIRONMENTAL DNA DETECTION

T. D'Aponte¹, V. Iannotti^{1,2}, B. Della Ventura¹ and R. Velotta¹

¹Department of Physics "Ettore Pancini", University of Naples Federico II, Via Cintia 26, 80126, Naples, Italy.

²CNR-SPIN (Institute for Superconductors, Oxides and Other Innovative Materials and Devices), Piazzale V. Tecchio 80, 80125, Naples, Italy



Oral communications

OC 11: ERICA CAVALIERE

RAPID COLORIMETRIC BIOSENSOR FOR ENVIRONMENTAL DNA DETECTION

E.Cavaliere, B. Della Ventura and R.Velotta

Department of Physics "E. Pancini", University of Naples Federico II, Via Cintia 26, I-80126 Napoli, Italy.

OC 12: RICCARDA ANTIOCHIA

AN ECOFRIENDLY IRON MOF-BASED IMMUNOSENSOR FOR SENSITIVE DETECTION OF VASCULAR ENDOTHELIUM GROWTH FACTOR IN SERUM OF CANCER PATIENTS

Ilaria Grazia Zizzari¹, Valeria Gigli¹, Cristina Tortolini¹, Andrea Isidori¹, Maria Chiara di Gregorio², Marianna Nuti¹, Riccarda Antiochia oral³

¹Department of Experimental Medicine, Sapienza University of Rome, Italy

³Department of Chemistry, Sapienza University of Rome, Italy

³Department of Chemistry and Drug Technologies, Sapienza University of Rome, Italy

OC 13: DAMIRA KANAYEVA

CARCINOEMBRYONIC ANTIGEN DETECTION USING AN ELECTROCHEMICAL IMPEDANCE SPECTROSCOPY-BASED APTASENSOR

Kanayeva, D., Yunussova, N.

Department of Biology, Nazarbayev University, 53 Kabanbay batyr Avenue, Astana 010000, Kazakhstan

OC 14: ABDELHAFID KARRAT

BIOINSPIRED SYNERGY STRATEGY BASED ON THE INTEGRATION OF NANOZYME INTO A MOLECULARLY IMPRINTED POLYMER FOR IMPROVED ENZYME CATALYTIC MIMICRY AND SELECTIVE BIOSENSING

Abdelhafid Karrat, Aziz Amine

Hassan II University of Casablanca, Mohammedia, Morocco.

OC 15: OUARDA EL HANI

MOLECULARLY IMPRINTED MEMBRANES PREPARATION WITH EFFECTIVE ELIMINATION OF NON-SPECIFIC ADSORPTION FOR ENHANCED SENSING APPLICATIONS

Ouarda El Hani, Khalid Digua, Aziz Amine

Hassan II University of Casablanca, Mohammedia, Morocco.

OC 16: JOSEANY M.S. ALMEIDA

AN ELECTROCHEMICAL ENZYME BIOSENSOR FOR HYDROGEN PEROXIDE BASED ON POLY(SAFRANINE T)-TERNARY DEEP EUTECTIC SOLVENT AND CARBON NANOTUBE MODIFIED ELECTRODES

Joseany M.S. Almeida^a, Razieh Seyfi Zouheba^a, Mostafa Rahimnejad^b, Christopher M.A. Brett^a

^aDepartment of Chemistry, CEMPRE, ARISE, Faculty of Sciences and Technology, University of Coimbra, 3004-535 Coimbra, Portugal.

^bBiofuel and Renewable Energy Research Center, Dept. of Biotechnology, Faculty of Chemical Engineering, Babol Noshirvani University of Technology, Babol, Iran.

OC 17: ANA MARIA OLIVEIRA-BRETT

A DNA-ELECTROCHEMICAL BIOSENSOR IN THE INVESTIGATION OF HAZARD COMPOUND-DNA INTERACTION MECHANISMS

Ana Maria Oliveira-Brett^a, A.-M. Chiorcea-Paquim, S.C. Oliveira, V.C. Dicuilescu, W.B.S. Machini

Department of Chemistry, ARISE, CEMPRE, Faculty of Sciences and Technology, University of Coimbra, 3004-535 Coimbra, Portugal

OC 18: JOSÉ MARÍA PALACIOS-SANTANDER

DEVELOPMENT OF POTENTIOMETRIC SENSORS BASED ON SONOGEL-CARBON ELECTRODES FOR THE DETERMINATION OF Na⁺ AND K⁺ IN CLINICAL SAMPLES

J. M. Palacios-Santander, J. J. García-Guzmán, V. García-Rodríguez, M. Jiménez-Rodríguez, A. Sierra-Padilla, D. Bellido-Milla, L. Cubillana-Aguilera

Institute of Research on Electron Microscopy and Materials (IMEYMAT), Department of Analytical Chemistry, Faculty of Sciences, Campus de Excelencia Internacional del Mar (CEIMAR), University of Cadiz, Campus Universitario de Puerto Real, Polígono del Río San Pedro S/N, 11510, Puerto Real, Cádiz, Spain.

OC 19: JUAN JOSÉ GARCÍA-GUZMÁN

MULTIPOLYMER ELECTROCHEMICAL BIOSENSOR BASED ON SONOGEL-CARBON ELECTRODES FOR REAL-TIME LACTATE MONITORING: DECREASING COSTS IN TRANSDUCER AND FLOW CELL

Juan José García-Guzmán, José María Palacios-Santander, Lorena Blanco-Díaz, Alfonso Sierra-Padilla, Dolores Bellido-Milla, Laura Cubillana-Aguilera

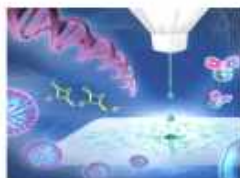
Institute of Research on Electron Microscopy and Materials (IMEYMAT), Department of Analytical Chemistry, Faculty of Sciences, Campus de Excelencia Internacional del Mar (CEIMAR), University of Cadiz, Campus Universitario de Puerto Real, Polígono del Río San Pedro S/N, 11510, Puerto Real, Cádiz, Spain.

OC 20: LAURA CUBILLANA-AGUILERA

SIMPLE AND COST-EFFECTIVE PH AND T SENSORS FROM TOP TO BOTTOM: NEW CHEMICAL PROBES BASED ON SONOGEL-CARBON TRANSDUCERS FOR PLASMA ANALYSES

Laura Cubillana-Aguilera, Juan José García-Guzmán, Álvaro Jesús Sainz-Calvo, Alfonso Sierra-Padilla, Dolores Bellido-Milla, José María Palacios-Santander

Institute of Research on Electron Microscopy and Materials (IMEYMAT), Department of Analytical Chemistry, Faculty of Sciences, Campus de Excelencia Internacional del Mar (CEIMAR), University of Cadiz, Campus Universitario de Puerto Real, Polígono del Río San Pedro S/N, 11510, Puerto Real, Cádiz, Spain.



Oral communications

OC 21: AYA M. MOSTAFA

DEVELOPMENT OF ECO-FRIENDLY MOLECULARLY IMPRINTED POLYMERS USING DEEP EUTECTIC SOLVENTS FOR SELECTIVE EXTRACTION AND HPLC ANALYSIS OF PEPSIN: TOWARDS A BIOSENSOR FOR GERD BIOMARKER DETECTION

Aya M. Mostafa^{1,2}, Stephen J. Barton¹, Stephen P. Wren¹ and James Barker¹

¹School of Life Sciences, Pharmacy and Chemistry, Kingston University, Kingston upon Thames, London KT1 2EE, UK.

²Department of Pharmaceutical Analytical Chemistry, Faculty of Pharmacy, Assiut University, Assiut, 71526, Egypt.

OC 22: DAVID PROBST

DEVELOPMENT OF A CONTINUOUS LEVODOPA MONITOR FOR IN VIVO APPLICATION

D. Probst¹, K. Batchu², T. Satomura³, K. Sode¹

¹ Department of Biomedical Engineering, University of North Carolina Chapel Hill and North Carolina State University; 116 Manning Dr. 10102A, Chapel Hill, NC 27599

² Larner College of Medicine, University of Vermont

³ Division of Engineering, Faculty of Engineering, University of Fukui, Fukui, Japan

OC 23: SKOMANTAS SERAPINAS

DETECTION OF SINGLE NUCLEOTIDE POLYMORPHISMS IN HUMAN GENOMIC DNA USING ELECTROCHEMICAL BIOSENSOR BASED ON MELTING ANALYSIS

Skomantas Serapinas, Deimantė Stakelytė, Marius Dagys and Dalius Ratautas

Life Science Center, Vilnius university, Saulėtekio al. 7 LT-10224, Vilnius, Lithuania

OC 24: MALGORZATA SZCZERSKA

CA21159 - UNDERSTANDING INTERACTION LIGHT - BIOLOGICAL SURFACES: POSSIBILITY FOR NEW ELECTRONIC MATERIALS AND DEVICES (PhoBioS)

M. Szczerska¹, P. Sokolowski¹, K. Cierpiak¹, F.J. Maldonado², S. Garcia², P. Wityk³, A. Luczkiewicz⁴

¹ Department of Metrology and Optoelectronics, Faculty of Electronics, Telecommunications and Informatics, Gdańsk University of Technology, Poland

² Telecommunication Engineering Department, University of Jaén, Avenida de la Universidad, S/N, 23700 Linares, Jaén, Spain

³ Department of Molecular Biotechnology and Microbiology, Faculty of Chemistry, Gdańsk University of Technology, Poland

⁴ Department of Environmental Engineering Technology, Faculty of Civil and Environmental Engineering, Gdańsk University of Technology, Gdańsk, Poland

OC 25: PATRYK SOKOŁOWSKI

URINARY MASS SCREENING WITH OPTICAL METHOD SUPPORTED BY MACHINE LEARNING

P. Sokolowski¹, F.J. Maldonado², S. Garcia-Galán², P. Wityk³, M. Szczerska¹

¹ Department of Metrology and Optoelectronics, Faculty of Electronics, Telecommunications and Informatics, Gdańsk University of Technology, Poland

² Telecommunication Engineering Department, University of Jaén, Avenida de la Universidad, S/N, 23700 Linares, Jaén, Spain

³ Department of Molecular Biotechnology and Microbiology, Faculty of Chemistry, Gdańsk University of Technology, Poland

OC 26: CHRISTOPHER M.A. BRETT

POLYMER FILM MODIFIED ELECTRODES PREPARED IN DEEP EUTECTIC SOLVENTS FOR SENSORS AND BIOSENSORS

Christopher M.A. Brett

Department of Chemistry, CEMMPRE, ARISE, Faculty of Sciences and Technology,

University of Coimbra, 3004-535 Coimbra, Portugal

OC 27: SHANG GAO

CONTROLLABLE LONG-DISTANCE DROPLET TRANSPORT WITH A BIOMIMETIC 2D EWOD ELECTRODE

Shang Gao oral, Jia Zhou

School of Microelectronics, Fudan University, Shanghai, China 200433

OC 28: SERGE COSNIER

BIOELECTROCHEMICAL DEVICES BASED ON BUCKYPAPERS

S. Cosnier, K. Krukiewicz, M. Saad, M. Lapkowski

Centre for Organic and Nanohybrid Electronics Silesian University of Technology, Konarskiego 22B, 44-100 Gliwice, Poland.

OC 29: KRUKIEWICZ KATARZYNA

NANOSTRUCTURED ELECTRODES FOR ULTRASENSITIVE DETECTION OF BIOMARKERS

K. Krukiewicz^{1,2}, A. Banaś¹, J. Kappen¹, D. R. Kumar²

¹Department of Physical Chemistry and Technology of Polymers, Silesian University of Technology, Strzody 9, 44-100 Gliwice, Poland

²Centre for Organic and Nanohybrid Electronics, Silesian University of Technology, Konarskiego 22B, 44-100 Gliwice, Poland

OC 30: VICENZO MAZZARACCHIO

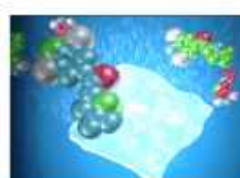
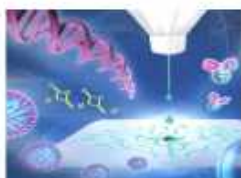
A NANOPAPER-BASED SMART DUAL-BIOSENSOR FOR REAL-TIME OPTO-ELECTROCHEMICAL ON-FIELD DETECTION OF ORGANOPHOSPHORUS PESTICIDES

V. Mazzaracchio¹, A. R. Sharifi^{1,2}, L. Gullo¹, M. A. Kian², F. Arduini^{1,3}

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Oral communications

OC 31: SAMEH KAZIZ

OPTIMIZING LAB-ON-A-CD BIOSENSOR FOR CANCER DIAGNOSIS BASED ON CRP MARKER DETECTION

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OC 32: CHÉRIF DRIDI

A MACHINE LEARNING APPROACH FOR SUSTAINABLE, SMART AND PORTABLE SEROTONIN AND DOPAMINE SIMULTANEOUS ANALYSIS NANOPLATFORM DEVELOPMENT

Maroua Moslah^{a,b}, Housseida Sakly^a, Chérif Dridi^a,

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^b University of Sousse, High School of Sciences and Technology of Hammam, Sousse, Tunisia.

OC 33 : CHRISTIAN GOSTI

FUNCTIONALIZED ORTHOPAEDIC IMPLANT AS PH ELECTROCHEMICAL SENSING TOOL FOR SMART DIAGNOSIS OF HARDWARE INFECTION

Christian Gosti^a, Luca Fiore^{a,b}, Vincenzo Mazzaracchio^a, Leonardo Duranti^a, Raffaele Vitiello^{c,d}, Giulio Maccauroc^c and Fabiana Arduini^a,

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OC 34: KATARZYNA KARPIENKO

RAMAN SPECTROSCOPY IN ANALYSIS OF PIGMENTS IN SKIN: APPLICATIONS IN TATTOO SAFETY

K. Karpienko¹, A. Szczerkowska-Dobosz², I. Kaczmarzyk¹ and M. S. Wróbel¹

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OC 35 : LUCA FIORE

PAPER-BASED ELECTROCHEMICAL POINT-OF-CARE DEVICE FOR PRECISION MEDICINE IN BREAST CANCER

L. Fiore^{a,b}, G. Leotta^a, A. Antinucci^a, G. Fegatelli^a, F. Chiara^c, S. Roggero^d, G. Arcuri^e, A. Orlandi^f, G. M. Bianco^f, C. Occhiuzzi^{g,h}, G. Marrocco^{i,j}, F. Arduini^{a,b}

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OC 36: MAKHTAR WAR

SENSITIVE AND SELECTIVE DETECTION OF TOBRAMYCIN IN FOOD SAMPLES USING SILVER NANOPARTICLES-ENHANCED MOLECULARLY IMPRINTED POLYMER SENSOR AND ELECTRONIC TONGUE

Makhtar War^a, Alassane Diouf^a, Benachir Bouchikhi^a, Nezha EL BARI^a

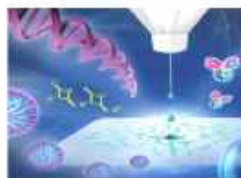
^a Biosensors and Nanotechnology Group, Department of Biology, Faculty of Sciences, Moulay Ismail University, B.P. 11201, Zitoune, Meknes, Morocco.

OC 37: MARCO FILICE

CONTROLLED SURFACE BIOFUNCTIONALIZATION OF GRAPHENE FIELD-EFFECT TRANSISTOR BIOSENSORS AS A POWERFUL TOOL TO IMPROVE SENSITIVITY AND REPRODUCIBILITY IN LABEL-FREE SARS-COV-2 DETECTION

Marco Filice,^{1,2*} L. Lozano-Chamizo^{1,2,3}, C. Márquez^{4,5}, J. C. Galdon^{4,5}, E. de la Fuente-Zapico^{4,5}, P. Martínez-Mazón^{4,5}, V. Gonzalez-Rumayor³, F. Gamiz^{4,5}, M. Marciello^{1,2*}

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Poster Communications

PO 01: KHALID MOUMANIS

SOFT LASER ABLATION AND FTIR SPECTROSCOPY: TOWARDS RAPID IDENTIFICATION OF PATHOGENIC BACTERIA IN THE AGRI-FOOD INDUSTRIES

Abdoulaye Souleymane Faye¹, Khalid Moumanis¹, Mohamed Walid Hassen¹, Simon Lévesque², Jean-Philippe Côté³, Hasna Mohammadi⁴, Aziz Amine⁴ and Jan J. Dubowski¹

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PO 02: HAMZA MOUSTAKIM

EXPLORING THE ROLE OF MODULABLE BIOSENSING SOLUTIONS IN ONE HEALTH EFFORTS FOR MANAGING GLOBAL HEALTH CHALLENGES IN MEDICAL DIAGNOSTICS AND ENVIRONMENTAL MONITORING

Hamza Moustakim, Aziz Amine, Hasna Mohammadi

Hassan II University of Casablanca, Faculty of Sciences and Techniques, Laboratory of Process Engineering and Environment, Chemical Analysis and Biosensors Group, P.A 146, Mohammedia, Morocco

PO 03: NADIA ZINE

NOVEL STRATEGY FOR LEAD DETECTION IN WATER SAMPLES USING Si_3N_4 WAFER COATED WITH IONOPHORE-DOPED CHITOSAN NANOFIBERS.

C. Pinorini¹, G. Tournier¹, M. Sigaud¹, M. Hangouet¹, P. Zerbino¹, V. Pyeshkova², J. Bausells³, A. Errachid¹, N. Zine¹

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PO 04: EITHNE DEMPSEY

PRINTABLE MEDIATED GLUCOSE BIOSENSOR DEVELOPMENT FOR WEARABLE DEVICES

Aoife Newman, Benne Dirk Johannes Reinoud Fennema, Eithne Dempsey

Kathleen Lonsdale Institute of Human Health, Chemistry Department, Maynooth University, Maynooth, Co. Kildare, Ireland.

PO 05: MARIA CRISTINA MESSIA

LIQUID CHROMATOGRAPHY COUPLED WITH AMPEROMETRIC DETECTION TO ASSESS THE NUTRITIONAL VALUE AND THERMAL DAMAGE OF GLUTEN-FREE PASTA

F. Cuomo¹, M.C. Messia¹, M. Quiquero¹, E. Marconi

¹Department of Agricultural, Environmental and Food Sciences, University of Molise, Campobasso, Italy;

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PO 06: ACHRAF BERNI

SCALABLE AND COST-EFFECTIVE IN SITU LASER SYNTHESIS OF NANOZYMES: PIONEERING THE FUTURE OF ENZYME-BASED ELECTROCHEMICAL SENSORS

Achraf Berni^{a,b}, Juan José García-Guzmán^b, José María Palacios-Santander^b, Aziz Amine^a, Laura Cubillana-Aguilera^b

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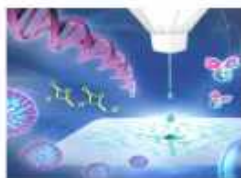
PO 07: SARA COLELLA

POLY(E-CAPROLACTONE) (PCL) NANOENCAPSULATED METRIBUZIN OPTICAL DETECTION USING THE GREEN PHOTOSYNTHETIC MICROALGA CHLAMYDOMONAS REINHARDTII

Sara Colella¹, Vincenzo Vedi¹, Amina Antonacci¹, Leonardo F. Fraceto², Viviana Scognamiglio¹

¹ Institute of Crystallography, National Research Council, Department of Chemical Sciences and Materials Technologies, Rome, Italy

² São Paulo State University (UNESP), Institute of Science and Technology of Sorocaba, Laboratory of Environmental Nanotechnology, Sorocaba, Brazil



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PO 08: SILVIA PIERMARINI / GIULIA VOLPE

EVALUATION OF THE APPLICABILITY OF AN ELISA KIT FOR THE DETERMINATION OF WGA IN MILLED FRACTIONS PRODUCED DURING THE MILLING PROCESS OF DURUM WHEAT

G. Lista, S. Piermarini, G. Volpe, L. Micheli, M.C. Messina*

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PO 09: LUDOVICA GULLO

REAGENT-FREE PHYTIC ACID ELECTROCHEMICAL DETECTION IN SPINACH USING A 3D-PRINTED AND PAPER-BASED BIOSENSOR

Ludovica Gullo^a, Igor Gabriel Silva Oliveira^b, Luca Fiore^{a,c}, Willyam Rôger Padilha Barros^b, Fabiana Arduina^c

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PO 10: MALGORZATA SZCZERSKA

FIBER-OPTIC SENSORS FOR ANTIBODIES DETECTION

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² Department of Biopharmaceutics and Pharmacodynamics, Medical University of Gdańsk, Al. Gen. J. Hallera 107, 80-416 Gdańsk, Poland;

³ Department of Metrology and Optoelectronics, Faculty of Electronics, Telecommunications and Informatics, Gdańsk University of Technology, 11/12 Narutowicza Street, Gdańsk, 80-233 Poland

PO 11: IKRAM CHAHRI

AN INGENIOUS PLATFORM FOR NUCLEIC ACID IMMOBILIZATION BASED ON POLYSTYRENE 96-WELL MICROPLATE HYDROXYLATION.

Ikram CHAHRI, Aziz AMINE, Hasna MOHAMMADI

Laboratory of Process Engineering & Environment, Faculty of Science and Technology, Hassan II University of Casablanca, P.O. Box 146, Mohammedia, Morocco.

PO 12: ASMA BLEL

DEVELOPMENT OF A NEW NANOBIOPLATFORM BASED ON GREEN GOLD SONONANOPARTICLES FOR THE SIMULTANEOUS DETECTION OF DOPAMINE (DA) AND SEROTONIN (5-HT)

Asma Blel^{a,b}, Juan José García Guzmán^c, Laura Cubillana-Aguilera^c, José María Palacios-Santander^c, Chérif Dridi^a

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^b University of Sousse, High School of Sciences and Technology of Hammam, Sousse, Tunisia.

^c Institute of Research on Electron Microscopy and Materials (IMEYMAT), Department of Analytical Chemistry, Faculty of Sciences, Campus de Excelencia Internacional del Mar (CEIMAR), University of Cadiz, Campus Universitario de Puerto Real, Polígono del Río San Pedro S/N, 11510 Puerto Real, Cadiz, Spain.

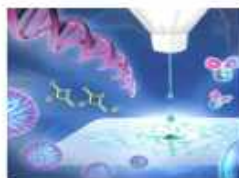
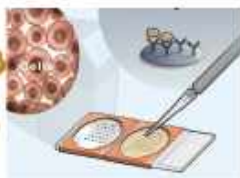
PO 13: LAMIA GUEDRI-KNANI

PERFORMANCE EVALUATION OF AN OPTIMIZED HIGHLY SENSITIVE PCF-SPR BIOSENSOR FOR CANCER CELLS DETECTION

Lamia Guedri-Knani^{1,2}, Sameh Kaziz¹, and Cherif Dridi¹

¹NANOMISENE Laboratory, LR16CRMN01, Centre for Research on Microelectronics and Nanotechnology (CRMN) of Sousse Technopole, B.P.334, Sahloul, Sousse, 4054, Tunisia.

²University of Sousse, Higher Institute of Applied Sciences and Technology of Sousse, Cité Ettafala, 4003, Ibn Khaldoun Sousse, Tunisia.



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PO 14: ROSSANA PITOCCHI

PROTEIN-BASED FIBERS FOR FLUORESCENT BIOSENSORS

R. Pitocchi, G. Fichera, A. Pennacchio, A. Piscitelli, P. Giardina, P. Cicatiello

University of Naples "Federico II" Department of Chemical Sciences

PO 15: LUCA FIORE

PAPER-BASED ELECTROCHEMICAL (BIO)SENSORS FOR A DISRUPTIVE ORIGAMI ORGAN-ON-CHIP DEVICE: PHOENIX-OOC

L. Fiore^{a,b}, L. Belcastro^a, F. Arduini^{a,b}

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PO 16: KAWTAR SAIDI

MASS PRODUCTION OF MOLECULARLY IMPRINTED POLYMERS VIA COST-EFFECTIVE PHOTOPOLYMERIZATION SYNTHESIS AND COLORIMETRIC DETECTION VIA SMARTPHONE

Kawtar Saidi¹, Dounia Elfadil², Aziz Amine¹

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PO 17: MONIKA KOSOWSKA

ADVANCING BIOMEDICAL SENSING: DIAMOND STRUCTURES FOR FIBER-OPTIC SENSORS

M. Kosowska¹, M. Szczerska²

¹ Faculty of Telecommunications, Computer Science and Electrical Engineering, Bydgoszcz University of Science and Technology, Al. Prof. S. Kaliskiego 7, 85-796 Bydgoszcz, Poland;

² Department of Metrology and Optoelectronics, Faculty of Electronics, Telecommunications and Informatics, Gdańsk University of Technology, 11/12 Narutowicza Street, Gdańsk, 80-233 Poland;

PO 18: REJDAL FATIMA EZZAHRA

RAPID PHOTOSYNTHESIS OF A MOLECULARLY IMPRINTED MEMBRANE FOR SELECTIVE FILTRATION AND SENSITIVE COLORIMETRIC ANALYSIS OF AN ANTIBIOTIC

Fatima Ezzahra Rejda, Ouarda El Hani, Aziz Amine

Laboratory of Process Engineering and Environment, Faculty of Sciences and Techniques, Hassan II University of Casablanca, P.A. 149, Mohammedia, Morocco.

PO 19: SARA PALMIERI

FAST SYNTHESIS OF MOLECULARLY IMPRINTED POLYMERS FOR SELECTIVE EXTRACTION OF PHYTOSTEROLS IN FOOD SAMPLES

S. Palmieri¹, E. Oliva¹, F. Eugenio¹, F. Fanti¹, M. Sergi², M. Del Carlo¹, D. Compagnone¹

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² Department of Chemistry, Sapienza University of Rome, Rome, Italy.

PO 20: VINCENZO VEDI

MICROALGAE BIOTECHNOLOGY: APPLICATIONS OF THE GREEN PHOTOSYNTHETIC ALGA CHLAMYDOMONAS REINHARDTII FROM BIOSENSING TO BIOFARM AND BIOREMEDIATION

Vincenzo Vedi¹, Sara Colella¹, Amina Antonacci¹, Giulia Gasperuzzo¹, Alessia Di Fraia², Gabriella Fiorentino², Viviana Scognamiglio¹

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² University of Naples Federico II, Department of Biology, Complesso Universitario Monte S. Angelo, Via Cinthia 4, 80126 Naples, Italy.

PO 21: VINCENZO MAZZARACCHIO

HYDROGEN PEROXIDE MONITORING IN EXHALED BREATH BY AN INNOVATIVE ALL-PAPER-BASED SENSING PLATFORM

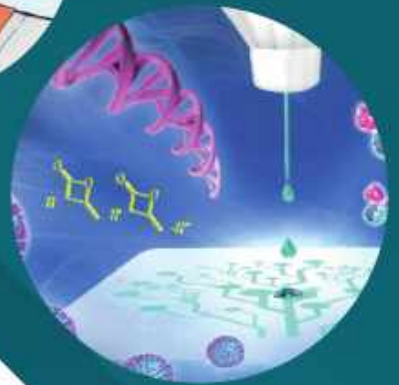
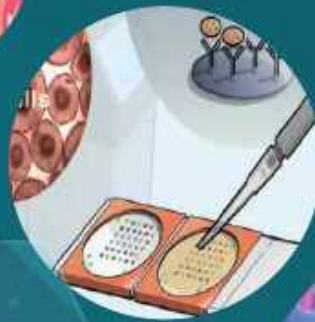
V. Mazzaracchio¹, F. Arduini^{1,2}

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