Poster Program

[P1.01] **Performance evaluation of hybrid dimensionality reduction methods (DR) for human activity recognition**

Mohammed Yussif Umaru*, Dr Ziggah Yao Yevenyo, *University of Mines and Technology, Ghana*

[P1.02] **Towards tailored-enzyme nano-reactors for biotechnology and life science**

Yuliya Silina*, *Saarland University, Germany*

[P1.03] **Chemically profiling bile-acids in human sera with a sensing array to detect and distinguish severe alcoholic hepatitis**

Liam Wilson[*1], Luke Tyson[2], Mark Thursz[2], William Rosenberg[3], William Peveler[1], *[1]University of Glasgow School of Chemistry, UK,[2]Imperial College London Faculty of Medicine, UK,[3]University College London Institute for Liver and Digestive Health, UK*

[P1.04] **Non-faradaic impedimetric biosensors for the direct detection of chronic diseases**

Abdulaziz Assaifan*, Hamad Albrithen, Khalid Alzahrani, Khalid Alhussaini, Abdulaziz Fakhouri, Abdullah Alodhayb, *King Saud University, Saudi Arabia*

[P1.05] **Indium tin oxide microarray chip for cell proliferation assay**

Hidetaka Ueno[*1], Shohei Yamamura[2], *[1]Kobe University, Japan,[2]National Institute of Advanced Industrial Science and Technology (AIST), Takamatsu, Japan*

[P1.06] **The effectiveness of wearable, real-time, ambient health assessment technologies to support nursing home nurses in the early detection of behavioural disorders: A pilot study**

Sofia Fernandes[*1,2], Henk Verloo[1], Armin von Gunten[3], *[1]University of Applied Sciences and Arts Western Switzerland (HES-SO), Switzerland,[2]Les Maisons de la Providence Nursing Home, Switzerland,[3]Lausanne University Hospital, Switzerland*

[P1.07] **Application of molecularly imprinted polypyrrole and polyaniline for electrochemical L-tryptophan sensors design**

Ernestas Brazys[*1], Vilma Ratautaite[2], Arunas Ramanavicius[1,2], [1]*Vilnius University Faculty of Chemistry and Geosciences, Lithuania,*[2]*State Research Institute Center for Physical Sciences and Technology, Vilnius, Lithuania*

[P1.08] **Microwave planar sensors for real-time contactless measurement of glucose aqueous solutions in biomedical and food applications**

Víctor García, Yolanda Campos-Roca[*], Alfonso Gómez García, Rafael Gómez Alcalá, Jesús Rubio, *University of Extremadura Polytechnic School, Spain*

[P1.09] **Development of a carbon paste electrode for the direct and indirect detection of biomarkers via enzyme-linked immunosorbent assays in a low-cost format**

Stuart Milne[*1], Damion Corrigan[2], [1]*University of Strathclyde, UK,*[2]*University of Strathclyde Department of Pure and Applied Chemistry, UK*

[P1.10] **In situ monitoring of bio-interface on graphene FET by photo-induced Fermi level modulation**

Yoshiaki Sugizaki[*1], Yasutaka Nishida[1], Akiko Yuzawa[1], Miyu Nagai[1], Hiroko Miki[1], Hiroshi Hamasaki[1], Yuhei Hayamizu[2], Miyuki Tabata[3], Yuji Miyahara[4], Atsunobu Isobayashi[1], Hideki Shibata[1], Hideyuki Tomizawa[1], [1]*Toshiba Corporation, Japan,*[2]*Tokyo Institute of Technology, Japan,*[3]*Tokyo University of Agriculture and Technology, Japan,*[4]*Tokyo Medical and Dental University, Japan*

[P1.11] **Affordable biosensors for rapid detection of diverse fuel microbes**

Hui Jean Lim[*], Muhammad Harith Bin Mohammad, Joy Pang, Susanna Leong, Adison Wong, *Singapore Institute of Technology, Food, Chemical and Biotechnology Cluster, Singapore*

[P1.12] **Strong coupling of surface plasmon polaritons and fluorescent dye excitons for optical biosensing application**

Ernesta Bužavaitė-Vertelienė[*1,2], Povilas Jurkšaitis[1], Zigmas Balevičius[1,2], [1]State Research Institute Center for Physical Sciences and Technology, Lithuania,[2]Vilnius Gediminas Technical University Faculty of Electronics, Lithuania

[P1.13] **All-3D printed electrochemical cell for on-site monitoring of surgical operations**

Anastasios Papavasileiou[*], Lukas Dekanovsky, Zdenek Sofer, University of Chemistry and Technology Prague, Czech Republic

[P1.14] **An electrochemical aptasensor for quick detection and identification of vancomycin-sensitive bacteria**

Zorica Novakovic[*1], Majd Khalife[2], Vlad Costache[2], Ivana Gadjanski[1], Marko Radovic[1], Jasmina Vidic[2], [1]BioSense, Serbia,[2]National Research Institute for Agriculture Food and Environment Île-de-France Jouy-en-Josas Antony Centre, France

[P1.15] **A single-cell biosensing device for the detection of tetrodotoxin and their analogues in pufferfish**

Jaume Reverté[*1,2], Francesc X. Sureda[2], Àngels Tudó[2], Mounira Alkassar[1,2], Maria Rambla-Alegre[1], Andres Sanchez-Henao[1], Manolis Mandalakis[3], Panagiota Peristeraki[3], Jorge Diogène[1], Mònica Campàs[1], [1]IRTA, Ctra. Poble Nou km 5.5, 43540, La Ràpita, Spain,[2]Universitat Rovira i Virgili, Spain,[3]Hellenic Centre for Marine Research, Greece

[P1.16] **Synthesis and Comparative Assessment of Antibody-Gold Nanoparticle Conjugates and Antigen Immunogenic Haptens for Multiplex Lateral Flow Biosensing Assay to Detect Mycotoxins**

Bilal Javed[*], Technological University Dublin, Ireland,Technological University Dublin Facility for Optical Characterisation and Spectroscopy, Ireland

[P1.17]	**Surface enhanced Raman spectroscopy (SERS) and Surface enhanced fluorescence (SEF) on Al foil and silicon as cost-efficient alternatives to traditional SERS and SEF substrates gold and silver; their applications in biomarker detection**

Rostislav Bukasov[*], *Nazarbayev University, Kazakhstan*

[P1.18]	**Comparison between two electrochemical acetylcholinesterase biosensors based on chitosan and on sol-gel for detection of quaternary ammonium compounds**

Youssef Ali[*1,2,3], Valerie GAUDIN[2], *[1]French National Interprofessional Centre for Dairy Economics, France,[2]National Agency for Food Environmental and Occupational Health and Safety, France,[3]Le Laboratoire d'électronique et de technologie de l'information, France*

[P1.19]	**Diabetes classification and acetone concentrations prediction in gas mixtures with high ethanol content**

Anna Paleczek[*], Dominik Grochala, Artur Rydosz, *AGH University of Krakow, Poland*

[P1.20]	**Functionalization of sensor surfaces with adhesion promoting peptides**

Ines Vogt[*1], Tetiana Kurkina[1], Ulrich Schwaneberg[1,2], *[1]RWTH Aachen University, Institute of Biotechnology, Germany,[2]DWI - Leibniz Institut für Interaktive Materialien, Germany*

[P1.21]	**Differential pulse voltammetry zidovudine biosensor based on silver nanoclay composites modified glassy carbon**

Sapokazi Timakwe[*], Mangaka Matoetoe, *Cape Peninsula University of Technology, South Africa*

[P1.22]	**Development of a Surface Plasmon Resonance-Based Immunosensor for Glypican-3 Detection: A Biomarker for Hepatocellular Carcinoma**

Lorico Jr Lapitan[*1,2], Mariusz Pietrzak[1,3], Marcin Drozd[1,3], Elzbieta Malinowska[1,3], *[1]Department of Medical Diagnostics, Centre for Advanced Materials and Technologies CEZAMAT, Poland,[2]Department of Chemical Engineering, University of Santo Tomas, The Philippines,[3]Chair of Medical Biotechnology, Faculty of Chemistry, Warsaw University of Technology, Poland*

[P1.23] **Sensing cortisol at the tip of microneedles in human skin**

Trevor Tilly[*1], Victoria Coyle[1,2], Irina Drachuk[1,2], Steve Kim[1], Angelica Aroche[3], Michael Daniele[3], Lawrence Drummy[1], Jorge Chávez[1], [1]*Air Force Research Laboratory, USA,*[2]*UES Inc, USA,*[3]*UNC/NCSU Joint Department of Biomedical Engineering, USA*

[P1.24] **Electrochemical immunosensor development for point-of-care cardiac troponin I detection**

Niamh Docherty[*1], Dr Ying Fu[1], Dr Susan Pang[2], Professor Damion Corrigan[1], [1]*Centre for Advanced Measurement Science and Health Translation, Department of Pure and Applied Chemistry, Strathclyde, UK,*[2]*National Measurement Laboratory at Laboratory of the Government Chemist, UK*

[P1.25] **Micromixing structure embedded capillary immunosensing kit for the low-cost point-of-care testing application**

Soo A Park[*], Kyung Won Lee, Hoyeon Lee, Yu jin Sung, Kyung Hee Song, Hyun C. Yoon, *Ajou University Department of Molecular Science and Technology, Republic of Korea*

[P1.26] **Ultra-compact fluorescence microscope for health applications**

Sergio Moreno[*1], Anna Vilà[2], Javier Ramón-Azcón[3,4], Juan Daniel Prades[1], Angel Diéguez[1], [1]*University of Barcelona, Spain,*[2]*University of Barcelona, Spain,*[3]*Institute of of Bioengineering of Catalonia (IBEC), Spain,*[4]*Institució Catalana de Recerca i Estudis Avançats (ICREA), Spain*

[P1.27] **An Electrokinetic SERS Platform for Highly Sensitive Virus Detection**

Shamim Azimi[*], Carlos Escobedo, Bruce Banfield, Aristides Docoslsis, *Queen's University, Canada*

[P1.28]   **A multimodal learning approach for the identification of various cervical intraepithelial neoplasia (CIN) stages through integration of photonic techniques and gold clinical standards**

Anna Drabik-Kruczkowska[1], Malgorzata Szczerska[2], Michal Kruczkowski[*3], [1]*Nicolaus Copernicus University in Toruń Ludwik Rydygier Collegium Medicum in Bydgoszcz, Poland,[2]Gdańsk University of Technology, Poland,[3]Bydgoszcz University of Science and Technology, Poland*

[P1.29]   **Contactless newborn temperature classification based on photonic measurements with accuracy boosting through data mining techniques**

Michał Kruczkowski[*1], Anna Drabik-Kruczkowska[2], [1]*Bydgoszcz University of Science and Technology, Poland,[2]Nicolaus Copernicus University in Toruń Ludwik Rydygier Collegium Medicum in Bydgoszcz, Poland*

[P1.30]   **Quartz crystal microbalance with dissipation monitoring analysis of wine polyphenols**

Giorgia Tori[*1], Mariacristina Gagliardi[1], Francesco Lunardelli[1], Chiara Sanmartin[2,3], Isabella Taglieri[2,4], Gianmarco Alfieri[5], Margherita Modesti[5], Andrea Bellincontro[5], Fabio Mencarelli[2], Marco Cecchini[1], [1]*SNS NEST Laboratory, Italy,[2]University of Pisa, Department of Agriculture, Food and Environment, Italy,[3]Interdepartmental Research Center, Nutraceuticals and Food for Health, University of Pisa, Italy,[4]nterdepartmental Research Center, Nutraceuticals and Food for Health, University of Pisa, Italy,[5]University of Tuscia Department for Innovation in Biological Agricultural Food and Forestry Systems, Italy*

[P1.31]   **A refractometry sensor for the detection of pathogens in bioreactor samples**

Marianneza Chatzipetrou[*1], Eleni Damianidou[2], Maria Dimadi[2], Atland Bokski[3], Erik Schreuder[3], Apostolos Klinakis[2], Ioanna Zergioti[1], [1]*National Technical University of Athens, Greece,[2]PhosPrint P. C. Lefkippos Technology Park, NCSR Demokritos, Greece,[3]LioniX International BV, The Netherlands*

[P1.32]   **An ensemble-based variable selection and classification multiclass approach to detect voice disorders from replicated recordings**

Lizbeth Naranjo[1], Daniel Merino[2], Antonio Jiménez[3], Carlos J. Pérez[*2], [1]Universidad Nacional Autónoma de México, Mexico,[2]University of Extremadura, Spain,[3]Polytechnic University of Madrid, Spain

[P1.33]   **A novel singlet oxygen-based photoelectrochemical platform for the detection of dengue viral RNA**

Hannah Op de Beeck[*1,2], Elise Daems[1,2], Lise Bleys[1,2], Anne Hauner[3], Kevin K. Ariën[3,4], Karolien De Wael[1,2], [1]A-Sense Lab, Department of Bioscience Engineering, University of Antwerp, Belgium,[2]NANOlab Center of Excellence, University of Antwerp, Belgium,[3]Virology Unit, Department of Biomedical Sciences, Institute of Tropical Medicine Antwerp, Belgium,[4]Department of Biomedical Sciences, University of Antwerp, Belgium

[P1.34]   **Electroanalytical immunosensor for polychlorinated biphenyls based on silver nanoparticles functionalized-polyaniline**

Malefetsane Khesuoe[*1], Mangaka Matoetoe[1], Fredrich Okumu[2], [1]Cape Peninsula University of Technology - Bellville Campus, South Africa,[2]Jaramogi Oginga Odinga University of Science and Technology, Kenya

[P1.35]   **Nickel-doped chitosan nanoparticles as a novel modification for insulin electrochemical sensor development**

Ivana Šišoláková[*1], Jana Shepa[1], Marjan Motiei[2], Radka Gorejová[1], Renáta Oriňaková[1,2], [1]Pavol Jozef Šafárik University in Košice Faculty of Science, Slovakia,[2]Tomas Bata University in Zlin Centre of Polymer Systems, Czech Republic

[P1.36]   **Characterization and application of poly(l-aminoacids)-based nanocomposites for phthalates biosensing**

Giulia Selvolini[*1], Costanza Scopetani[1], Agnese Bellabarba[2,3], Tania Martellini[4,5], Alessandra Cincinelli[1,5], Carlo Viti[2,3], Alessandra Adessi[2], Giovanna Marrazza[1], [1]*Department of Chemistry "Ugo Schiff" (DICUS), University of Florence, Via della Lastruccia 3, 50019 Sesto Fiorentino (FI), Italy,*[2]*Laboratory of Phenomics, Genomics, and Proteomics (GENEXPRESS), University of Florence, Via della Lastruccia 14, 50019 Sesto Fiorentino (FI), Italy,*[3]*Department of Agriculture, Food, Environmental and Forestry Sciences (DAGRI), University of Florence, Piazzale delle Cascine 18, 50144 Florence, Italy,*[4]*Department of Chemistry "Ugo Schiff" (DICUS), University of Florence, Via della Lastruccia 3, 50019 Sesto Fiorentino (FI), Italy,*[5]*Center for Colloid and Surface Science (CSGI), University of Florence, Via della Lastruccia 3, 50019 Sesto Fiorentino (FI), Italy*

[P1.37]   **Nanozymatic yolk-shell covalent organic framework on metal-organic framework for colorimetric nitrate detection**

Eda Akin, Sruthi Prasood Usha, Mattis Neubauer, Zeynep Altintas[*], *Chair for Bioinspired Materials and Biosensor Technologies, Institute of Material Science, CAU / Kiel University, Germany*

[P1.38]   **The benefits of digitising lateral flow tests through electrochemical result interpretation**

Benjamin Edwards[*], Uroš Zupančič, Paul Ko Ferrigno, Edward Lee-Emery, Sarah Chapman, Tomas Hardwick, Bethan Larkin, Martina Piano, Jacob Seager, Adiba Miah, Isabel Potterill, *éclateral, UK*

[P1.39] **R2R UV NIL-fabricated lab-on-foil microfluidic chip and reader device for genetic POC diagnostics of genetic disorders**

Martin Tscherner[*1], Anja Haase[1], Anne Linhardt[1], Laura Angermann-Krammer[1], Maria Belegratis[1], Stefan Németh[2], Christian Oberkanins[2], Herbert Ernst[3], Gregor Grobner[4], Max Sonnleitner[4], Barbara Stadlober[1], Jan Hesse[1], [1]JOANNEUM RESEARCH - MATERIALS, Austria,[2]ViennaLab Diagnostics GmbH, Austria,[3]Jabil Austria, Wien, Austria,[4]GENSPEED Biotech GmbH, Reinbach, Austria

[P1.40] **The combined technology of single-cell microarray chips and peptide nucleic acid probes for analysis of single nucleotide-mutated single-cancer cell**

Hajime Shigeto[*], Shohei Yamamura, Health and Medical Research Institute, National Institute of Advanced Industrial Science and Technology (AIST), Japan

[P1.41] **Astringency intensity analysis based on the mimetic-tongue hydrogel sensor**

Jingjing Liu[*1], Shikun Liu[1], Zetao Chen[2], Shuang Li[2], Yan Zhang[1], Zongying Zhang[1], Xiaojun Sun[1], Yanfeng Li[1], Longfei Li[1], Yushuang Luo[1], [1]Northeast Electric Power University, China,[2]Tianjin University, China

[P1.42] **DNA nanostructures for biosensing interfaces made from verious substrates**

Shiping Song[*], Shanghai University, China

[P1.43] **Surface-enhanced fluorescence (SEF) for the detection of bacterial cells on aluminum foil**

Rostislav Bukasov, Alisher Sultangaziyev, Alisher Rapikov, Olena Filchakova[*], Nazarbayev University, Kazakhstan

[P1.44] **Multichannel measurement of biomolecular reactions using ultra-high frequency wireless 10x10 QCM biosensor array**

Ryo Umetsu[*1], Manabu Yoshino[1], Fumihito Kato[1,2], Hirotsugu Ogi[3], [1]Department of Mechanical Engineering, Nippon Institute of Technology, Japan,[2]Graduate School of Engineering, Osaka University, Japan,[3]Graduate School of Engineering, Osaka University, Japan

[P1.45]   **Traffic light-based point-of-care test for the rapid stratification of fever syndromes**

Melania Mesas[*1,2], Anaixis del Valle[3,2], Mercè Martí[2], Arnau Pallarès-Rusiñol[4], Jofre Ferrer-Dalmau[4], Bàrbara Baró[5], Quique Bassat[5], Maria Isabel Pividori[3,6], [1]*Grup de Sensors i Biosensors, Departament de Química, Universitat Autònoma de Barcelona,, Spain,[2]Biosensing and Bioanalysis Group, Institute of Biotechnology and Biomedicine, Universitat Autònoma de Barcelona, Spain,[3]Grup de Sensors i Biosensors, Departament de Química, Universitat Autònoma de Barcelona, Spain,[4]BioEclosion SL, Spain,[5]Barcelona Institute for Global Health, Spain,[6]Biosensing and Bioanalysis Group, Institute of Biotechnology and Biomedicine, Spain*

[P1.46]   **Development of an innovative colorimetric acetylcholinesterase sensor for the detection of quaternary ammonium compounds in dairy products**

Valerie Gaudin[*1,2], Youssef Ali[3,1], Christophe Soumet[1], Michel Laurentie[1], Pascal Mailley[4], [1]*Anses, Laboratory of Fougeres, European Union Reference Laboratory (EU-RL) for Antimicrobial and Dye Residue Control in Food-Producing Animals, Bioagropolis, La Haute Marche-Javené, 35302 Fougères, France,[2]Member of the Actia Chlean Joint Technology Network, France,[3]CNIEL, Centre national et interprofessionnel de l'économie laitière, 42 rue Châteaudun, 75009 Paris, France,[4]Departement of Microtechnologies for Health and Biology, Directorate of CEA Technological Research Division, 17 avenue de Martyrs, 38054 Grenoble, France*

[P1.47]   **Solid-phase synthesis of anti-spike artificial antibodies for sensing the SARS-CoV-2 protein**

Amaia Alday[*1], Alberto Gómez[1], Nora Unceta[1], Lucia Diez-Caballero[1], Antonio Guerreiro[2], M. Aránzazu Goicolea[1], Ramón J. Barrio[1], [1]*Department of Analytical Chemistry, University of the Basque Country UPV/EHU, 01006, Vitoria-Gasteiz (Álava), Spain,[2]MIP Discovery, UK*

[P1.48] **Bringing electrochemical drug sensors to the forensic field: Navigating the regulations and requirements for analytical techniques**

Florine Joosten[*1,2], Robin Van Echelpoel[1,2], Karolien De Wael[1,2], [1]A-Sense Lab, Department of Bioscience Engineering, University of Antwerp, Belgium,[2]NANOlab Center of Excellence, University of Antwerp, Belgium

[P1.49] **Fluorescent detection of *Campylobacter jejuni* using molecularly imprinted polymers as recognition elements**

Rahil Radfar, Mattis Neubauer, Zeynep Altintas[*], *Bioinspired Materials and Biosensors Technologies, Christian-Albrechts-Universität zu Kiel, Germany*

[P1.50] **Electrochemical biosensor platform for quantitative immunoassays**

Thor Pedersen[*1,2], Peter Fojan[1], Anne Pedersen[3], Nils Magnusson[2,3], Leonid Gurevich[1], [1]*Aalborg University Department of Materials and Production, Denmark,*[2]*Biostrip APS, Denmark,*[3]*Aarhus University Department of Endocrinology and Internal Medicine, Denmark*

[P1.51] **Integration of molecularly imprinted polymers into paper-based nucleic acid lateral flow platforms for enhanced multiplexed point-of-need diagnostics**

Jennifer Marfà[*1,2], María Isabel Pividori[1,2], [1]*Autonomous University of Barcelona, Spain,*[2]*Autonomous University of Barcelona Institute of Biotechnology and Biomedicine, Spain*

[P1.52] **Real-time kidney and kidney tumor segmentation from CT scans images using the Yolact architecture**

Jordi Aceiton-Cardona[1,2], Carles Ventura[1], Ismael Benito-Altamirano[*1,3], [1]*Open University of Catalonia, Spain,*[2]*Institut Català d'Oncologia, Spain,*[3]*University of Barcelona, Spain*

[P1.53]   **Genomic profiles and their relationships with clinical characteristics and immune features in cervical cancer**

Zinan Lu[*1], Zehao Wan[2], Yumian Huang[3], Shiang Li[3], Zhiyuan Lv[4], [1]Xinjiang Medical University Affiliated Tumor Hospital, China,[2]Xinjiang Medical University Affiliated First Hospital, China,[3]Xinjiang Medical University Affiliated Tumor Hospital, China,[4]Xinjiang Medical University College of Pharmacy, China

[P1.54]   **Oncostatin M (OSM) label-free immunosensor for early diagnosis of inflammatory bowel diseases (IBD) in human serum**

Elisa Sciurti[*1], Maria Assunta Signore[2], Luciano Velardi[2], Riccardo Di Corato[2], Laura Blasi[2], Pietro Aleardo Siciliano[2], Luca Francioso[2], [1]Institute for Microelectronics and Microsystems National Research Council Lecce Unit, Italy,[2]Institute for Microelectronics and Microsystems National Research Council Lecce Unit, Italy

[P1.55]   **Electrochemical microfluidic multiplexed biosensor for CRISPR-powered detection of unamplified miR-520f**

Midori Johnston[*1,2], Sean-Patrick Riechers[3], Frederic Brosseron[4], Ceren Ates[1,2], Regina Glatz[1,2], Hasti Mohsenin[5], Maurizio Severino[4], Michael Heneka[3], Wilfried Weber[6], Can Dincer[1,2], [1]Department of Microsystems Engineering (IMTEK), University of Freiburg, Germany,[2]FIT Freiburg Center for Interactive Materials and Bioinspired Technologies, University of Freiburg, Germany,[3]Luxembourg Centre for Systems Biomedicine (LCSB), University of Luxemburg, Luxembourg,[4]Bonn University Hospital and the German Center for Neurodegenerative Diseases (DZNE), Germany,[5]Faculty of Biology and Signalling Research Centres BIOSS and CIBSS, University of Freiburg, Germany,[6]INM – Leibniz Institute for New Materials and Saarland University, Department of Materials Science and Engineering, Germany

[P1.56] **Optical fiber biosensor as a label-free technology for breast cancer stem cell detection**

Marzhan Nurlankyzy[*1,2], Kanagat Kantoreyeva[2], Zhuldyz Myrkhiyeva[1,3], Zhannat Ashikbayeva[1,3], Daniele Tosi[1,2], Aliya Bekmurzayeva[1], [1]*Nazarbayev University National Laboratory Astana, Kazakhstan,*[2]*Nazarbayev University School of Engineering and Digital Sciences, Kazakhstan,*[3]*Nazarbayev University, School of Sciences and Humanities, Kazakhstan*

[P1.57] **Nano-2D Ni-MOF (metal-organic framework) as a stable mediator complex for electrochemical detection of purine metabolism byproduct on a flexible substrate**

Archini Paruthi[*], Navakanta Bhat, *Indian Institute of Science, Bangalore, India*

[P1.58] **Optical readout for cheap and fast quantitative environmental monitoring of anthropogenic analytes**

Andreas Müller[*], Rosa Gehring, Veronika Riedl, Manuela Mießler, Tilo Pompe, *Leipzig University, Germany*

[P1.59] **Non-enzymatic electrochemical biosensor based on laser induced graphene for glucose monitoring**

Sónia O. Pereira[*1], Maria Fidalgo[1], Rafael Ribeiro[1], António Teixeira[2], Nuno M. F. Santos[1], Florinda M. Costa[1], [1]*i3N, Department of Physics, University of Aveiro, 3810-193 Aveiro, Portugal,*[2]*IEETA, Dep. Electronics Telecom. Informatics, LASI, University of Aveiro, 3810-193 Aveiro, Portugal*

[P1.60] **Aptamer-based optical fiber sensor for optical and electrochemical label-free sensing of heavy metal ions**

Jakub Sikora[*1,2], Jakub Warszewski[1], Tomasz Gabler[1], Agnieszka Martychowiec[1], Norbert Kwietniewski[1], Monika Janik[1], Marcin Koba[1,3], Marcin Olszewski[2], Mateusz Śmietana[1,4], [1]*Warsaw University of Technology Institute of Microelectronics and Optoelectronics, Poland,*[2]*Warsaw University of Technology Faculty of Chemistry, Poland,*[3]*National Institute of Telecommunications, Poland,*[4]*Łukasiewicz Research Network – Institute of Microelectronics and Photonics, Poland*

[P1.61] **Design of highly sensitive immunosensors based on gold nanoparticles**

Almira Ramanaviciene[*1], Asta Kausaite-Minkstimiene[1], Benediktas Brasiunas[2], Arunas Ramanavicius[2], Anton Popov[2], [1]*NanoTechnas - Center of Nanotechnology and Materials Science, Faculty of Chemistry and Geosciences, Vilnius University, Lithuania,*[2]*NanoTechnas - Center of Nanotechnology and Materials Science, Faculty of Chemistry and Geosciences, Vilnius University, Lithuania*

[P1.62] **Diffusion layer dispersive electrodes for electrochemical immunoassays**

Eun Young Kim, Ga-Yeon Lee[*], *Korea Institute of Ceramic Engineering and Technology, Republic of Korea*

[P1.63] **Peptide-driven low-volume fluorescence detection of heavy metals using glass capillary system**

Monika Janik[*1], Emil Pituła[1], Rafał Kasztelanic[2,3], Marcin Olszewski[4], Marta Sosnowska[5], Małgorzata Biedulska[5], Marcin Koba[1,6], Ryszard Buczyński[2,3], Mateusz Śmietana[1,2], [1]*Warsaw University of Technology Institute of Microelectronics and Optoelectronics, Poland,*[2]*Łukasiewicz Research Network – Institute of Microelectronics and Photonics, Poland,*[3]*University of Warsaw Faculty of Physics, Poland,*[4]*Warsaw University of Technology Faculty of Chemistry, Poland,*[5]*Institute of Biotechnology and Molecular Medicine, Poland,*[6]*National Institute of Telecommunications, Poland*

[P1.64] **Facile fabrication of rGO/PDMS membrane for flexible and stretchable piezoresistive wearable sensors**

Balu Raveendran[*1,2,3], Dipti Gupta[1,2], Tuncay Alan[3,2], Sunita Chauhan[2], [1]*Indian Institute of Technology Bombay, India,*[2]*IITB-Monash Research Academy, India,*[3]*Monash University, Australia*

[P1.65] **Surface modification of reduced graphene oxide for enhanced antibody binding and high-performance complement III protein biosensor**

Tanmoya Nemai Ghosh[*], Shiv Govind Singh, *Indian Institute of Technology Hyderabad, India*

[P1.66] **Optimized electrochemical aptasensor for sars-cov-2: Towards a variant-specific point-of-care detection**

Sergio R. Molina Ramirez[1], Nafiseh Shamiseresht[2], Mateo A. Martínez-Roque[1], Ferdinando Catania[1], Kevin Graef[*1], Martin Rabe[2], Andreas Offenhäusser[1], Dirk Mayer[1], Gabriela Figueroa-Miranda[1], [1]Forschungszentrum Jülich GmbH, Germany,[2]Max-Planck-Institut für Eisenforschung GmbH, Germany

[P1.67] **Expanding molecular monitoring: 3D printed microneedles as electrochemical aptamer-based sensors for continuous health monitoring**

Lucía Morillo-Victorero[*1,2], Andrea Montón-Vicente[1], Menyar Ben Jaballaha[2], Jorge Rapp[1], Hedieh Haji-Hashemi[3], Beatriz Prieto-Simón[2,4], Maria Alba[1], [1]ARQUIMEA Research Center, Spain,[2]Institute of Chemical Research of Catalonia, Spain,[3]Rovira i Virgili University Department of Electronic Engineering, Spain,[4]Catalan Institution for Research and Advanced Studies, Spain

[P1.68] **Magnetic nanocomposite-based ultrasensitive electrochemical biosensors for lung cancer detection**

P H Sai Siddharth[*1], Dakshita Sharma[1], Mayank Mishra[2], Prakhar Sharma[2], Chi Hsien Liu[3], Dharitri Rath[1], [1]Indian Institute of Technology Jammu, India,[2]All India Institute of Medical Sciences - Rishikesh, India,[3]Chang Gung University, Taiwan

[P1.69] **Designed ionic liquid-based soft materials for artificial olfaction**

Carina Esteves[*1,2], Susana Palma[1,2], Gonçalo Teixeira[1,2], Susana Fernandes[1,2], Arménio Barbosa[1,2], Ana Roque[1,2], [1]Associate Laboratory i4HB - Institute for Health and Bioeconomy, Chemistry Department, NOVA School of Science and Technology, NOVA University of Lisbon, Portugal,[2]UCIBIO – Applied Molecular Biosciences Unit, Department of Chemistry, NOVA School of Science and Technology, NOVA University of Lisbon, Portugal

[P1.70] **Heavy metal ion detection with enhanced green fluorescent protein in a multiple glass capillary system**

Emil Pitula[*1], Monika Janik[1], Katarzyna Szymańska[2], Rafał Kasztelanic[3,4], Marcin Olszewski[5], Marcin Koba[1,6], Ryszard Buczyński[7,4], Mateusz Smietana[1,4], [1]*Warsaw University of Technology Institute of Microelectronics and Optoelectronics, Poland,*[2]*Warsaw University of Technology Faculty of Chemistry, Poland,*[3]*University of Warsaw, Poland,*[4]*Lukasiewicz Research Network - Institute of Microelectronics and Photonics, Poland,*[5]*Warsaw University of Technology, Faculty of Chemistry, Poland,*[6]*National Institute of Telecommunications, Poland,*[7]*University of Warsaw Faculty of Physics, Poland*

[P1.71] **New impedimetric continuous monitoring biosensor system based on enzyme inhibition for determination of heavy metal ions in water**

Veronika Bakhmat[1], Oleksandr Soldatkin[1,2], Sergey Dzyadevych[1,2], Viktoriya Pyeshkova[*1,3], [1]*Institute of Molecular Biology and Genetics National Academy of Sciences of Ukraine, Ukraine,*[2]*Taras Shevchenko National University of Kyiv, Ukraine,*[3]*The Open University, UK*

[P1.72] **Cell culture on nanomembrane using liquid transfer imprint lithography**

Junhyoung Ahn[*], Sua Park, Kee-Bong Choi, JaeJong Lee, *Korea Institute of Machinery & Materials, Republic of Korea*

[P1.73] **Innovative immunosensing platforms for the detection of claudin18.2 protein utilizing amine-enriched polymelamine-modified carbon nanomaterial-based screen-printed electrodes**

Shimaa Eissa[*], Pandiyaraj Kanagavalli, *Khalifa University of Science and technology, United Arab Emirates*

[P1.74] **Development of a microfluidic diagnostic device for rapid detection of Escherichia coli**

Tugba Ozer[*], *Yildiz Technical University, Turkey*

[P1.75] **Rapid, quantification of bacteria and identification of resistant organisms for point-of-care diagnosis of urinary tract infections**
Kathryn Lamb-Riddell[*], Olabimpe Adegbuyi, Janice Kiely, Richard Luxton, *University of the West of England, UK*

[P1.76] **The first acetylcholinesterase and butyrylcholinesterase biosensor to detect quaternary ammonium disinfectants**
Lynn Mouawad[*1,2], Georges Istamboulie[1,2], Gaëlle Catanante[1,2], Thierry Noguer[1,2], [1]*Biocapteurs-Analyses-Environnement (BAE-LBBM), Université de Perpignan Via Domitia, France,*[2]*Laboratoire de Biodiversité et Biotechnologies Microbiennes, USR 3579 Sorbonne Universités (UPMC) Paris 6 et CNRS Observatoire Océanologique, Banyuls-sur-Mer, France*

[P1.77] **Sensitive electrochemical detection of 1,2-dichlorobenzene based on nafion/FeO-decorated CNT nanocomposites fabricated glassy carbon electrodes**
Faisal K. Algethami[*], *Department of Chemistry, College of Science, Imam Mohammad Ibn Saud Islamic University (IMSIU), Saudi Arabia*

[P1.78] **Wearable textile electrochemical biosensor utilizing carbon-based materials for sweat lactate monitoring**
Anandapadmanabhan Ambily Rajendran[*1], Marta Vegas-García[1], Beatriz Lucas Garrote[1], Laura García-Carmona*[1], Alfredo Quijano-López[1,2], Marta García-Pellicer[1], [1]*Instituto Tecnológico de la Energía (ITE), Av. Juan de la Cierva, 24, 46980, Spain,*[2]*Instituto de Tecnología Eléctrica, Universitat Politècnica de València, Camino de Vera s/n Edificio 6C 46022, Spain*

[P1.79] **Specific and Label-Free Real-Time Sensing of Organo Phosphate using an Affordable BioFET**
Pooja Verma[*1], Gil Shalev[1], Izhar Ron[1], Evgeny Pikhay[2], [1]*Ben-Gurion University of the Negev, Israel,*[2]*Tower Semiconductor Ltd, Israel*

[P1.80]　　**Quantification of plasma α1-acid glycoprotein (AGP) level using SERS and CNN transfer learning method**

Mariia Erzina[*1], Andrii Trelin[2,1], Anastasiia Skvortsova[1], Vaclav Svorcik[1], Oleksiy Lyutakov[1], [1]University of Chemistry and Technology Prague, Czech Republic,[2]Czech Technical University in Prague, Czech Republic

[P1.81]　　**Unveiling the potential of eutectogels: A study on enzyme immobilization and biosensing applications**

Yolanda Alacid Martínez[*1,2], Raúl Martínez Baquero[1,2], Rocío Esquembre Tomé[1], María José Martínez-Tomé[1], C. Reyes Mateo Martínez[1], [1]Instituto de Investigación Desarrollo e Innovación en Biotecnología Sanitaria de Elche (IDiBE), Universidad Miguel Hernández de Elche (UMH), 03202 Elche, Alicante, Spain,[2]Departamento de Química Física, Universidad de Alicante, 03690 Alicante, Spain

[P1.82]　　**Ingestible smart nanopaper sensor for optical non-invasive diagnosis of *Helicobacter pylori* infection**

Zeinab Asghari Adib[1], Amir Reza Sharifi[1], Mohammad Ali Kiani[1], Hossein Yousefi[2], Daniel Horák[3], Uliana Kostiv[3], Ali Nabavi-Rad[4], Abbas Yadegar[4], Mohammad Yaghoubi-Avini[5], Hamed Golmohammadi[*1,6], [1]Nanosensor Bioplatforms Laboratory, Chemistry and Chemical Engineering Research Center of Iran, 14335-186, Tehran, Iran, Iran,[2]Laboratory of Sustainable Nanomaterials, Department of Wood Engineering and Technology, Gorgan University of Agricultural Sciences and Natural Resources, Gorgan, 4913815739, Iran, Iran,[3]Institute of Macromolecular Chemistry, Academy of Sciences of the Czech Republic, Heyrovského nám. 2, 162 06 Prague 6, Czech Republic, Czech Republic,[4]Foodborne and Waterborne Diseases Research Center, Research Institute for Gastroenterology and Liver Diseases, Shahid Beheshti University of Medical Sciences, Tehran, Iran, Iran,[5]Departments of Microbiology and Microbial Biotechnology, Faculty of Life Sciences and Biotechnology, Shahid Beheshti University G.C., Tehran, Iran, Iran,[6]University of Freiburg Department of Microsystems Engineering, Germany

[P1.83]   **Evaluation of the interaction between the anti-inflammatory drug acetaminophen and DNA using an electrochemical biosensor**
Georgina Alarcon-Angeles[*], Maria-Guadalupe Valencia-Valencia, Marcela Hurtado Y de la Peña, Martin Gomez-Hernandez, Juan -Carlos Ruiz-Segura, *Metropolitan Autonomous University - Xochimilco Campus, Mexico*

[P1.84]   **Investigation of platelet activation on paper-based lateral flow devices**
Jerro Saidykhan, Jennifer May, Anthony Killard[*], *University of the West of England, UK*

[P1.85]   **SMART Biosensors - the future of analysis**
Katrina Campbell[*], *Queen's University Belfast, UK*

[P1.86]   **REDOX CAPACITIVE SENSOR BASED ON MOLECULARLY IMPRINTED POLYMER FOR HUMAN ALBUMIN DETECTION**
Heitor Trevizan[1], André Olean-Oliveira[2], Patricia Monteiro Seraphim[1], Marcos F. S. Teixeira[*1], [1]*Sao Paulo State University Julio de Mesquita Filho, Brazil,*[2]*University of Duisburg-Essen, Germany*

[P1.87]   **The electrical outputs during poising at different potentials correlate with the up-regulated anaerobic pathways in bacteria**
Yolina Hubenova[*1,2], Eleonora Hubenova[2,1], Petar Podlesniy[3], Yordan Manasiev[4], Mario Mitov[5], [1]*Institute of Electrochemistry and Energy Systems Academician Evgeni Budevski Bulgarian Academy of Sciences, Bulgaria,*[2]*Paisii Hilendarski University of Plovdiv, Bulgaria,*[3]*Spanish National Research Council Library and Archives Network, Spain,*[4]*Stephan Angeloff Institute of Microbiology Bulgarian Academy of Sciences, Bulgaria,*[5]*South-West University of Blagoevgrad, Bulgaria*

[P2.01]   **Design and site-directed immobilization of recombinant antibody fragments genetically-fused with materials-binding peptides for sensitive immuno-sensing**
Yoichi Kumada[*], *Kyoto Institute of Technology, Japan*

[P2.02]   **One-pot/one-electrode nanobioreactors – A novel strategy for modular biocatalysis**

Yuliya Silina[*1], Marcus Koch[2], Ekaterina Zolotukhina[3], [1]Saarland University, Germany,[2]INM Leibniz Institute for New Materials, Germany,[3]Institute of Problems of Chemical Physics RAS, Russia

[P2.03]   **Smart wearable nanopaper patch for continuous multiplexed optical monitoring of sweat parameters**

Amir Reza Sharifi[1], Sina Ardalan[1], Raziyeh Sadat Tabatabaee[1], Sara Soleimani Gorgani[2], Hossein Yousefi[3], Kobra Omidfar[4], Mohammad Ali Kiani[1], Can Dincer[5,6], Tina Naghdi[1,6], Hamed Golmohammadi[*1,6], [1]Nanosensor Bioplatforms Laboratory, Chemistry and Chemical Engineering Research Center of Iran, Iran,[2]Endocrinology and Metabolism Cellular and Molecular Sciences Institute, Tehran University of Medical Sciences, Iran,[3]Laboratory of Sustainable Nanomaterials, Department of Wood Engineering and Technology, Gorgan University of Agricultural Sciences and Natural Resources, Iran,[4]Biosensor Research Center, Endocrinology and Metabolism Cellular and Molecular Sciences Institute, Tehran University of Medical Sciences, Iran,[5]University of Freiburg, FIT Freiburg Centre for Interactive Materials and Bioinspired Technology, Germany,[6]University of Freiburg, IMTEK – Department of Microsystems Engineering, Germany

[P2.04]   **Surface functionalization methods for optimal DNA attachment on glass substrates**

Perrine Robin[*1], Alireza Kavand[1], Pauline Skigin[1], Lucas Mayoraz[1], Davide Staedler[2], Sandrine Gerber-Lemaire[1], [1]Federal Polytechnic School of Lausanne, Switzerland,[2]TIBIO Suisse Romande, Switzerland

[P2.05]   **Carbon based graphitic carbon nitride/1-pyrenebutyric acid n-hydroxysuccinimide /polythiophene nanocomposite photoelectrochemical biosensor for carbohydrate antigen 19-9 detection**

Adriel Yan Sheng Tan[*1,2], Faliang Cheng[2], Min Zhang[2], Kasturi Muthoosamy[1], Michelle Tan[1], Sivakumar Manickam[3], [1]University of Nottingham Malaysia Faculty of Engineering, Malaysia,[2]Dongguan University of Technology School of Environment and Civil Engineering, China,[3]University of Technology Brunei Faculty of Engineering, Brunei Darussalam

[P2.06]   **Streamlining COVID-19 serology test chip production: A journey from injection molding to high-volume roll-to-roll microfluidic sensor manufacturing**

Pakapreud Khumwan[*1], Christian Wolf[1], Stephan Ruttloff[1], Johannes Götz[1], Anja Haase[1], Jan Hesse[1], Conor O'Sullivan[2], Nastasia Okulova[2], Alvaro Conde[3], Maciej Skolimowski[3], Mirko Lohse[4], Ingo Katzmayr[5], Nikolaus Ladenhauf[5], Max Sonnleitner[5], [1]JOANNEUM RESEARCH MATERIALS, Austria,[2]Inmold A/S, Denmark,[3]Micronit Microfluidics BV, The Netherlands,[4]micro resist technology GmbH, Germany,[5]Genspeed Biotech GmbH, Austria

[P2.07]   **Low-cost platform for determination of NTproBNP in saliva using graphene-based aptasensor**

Stefan Jarić[*], Ivan Bobrinetskiy, University of Novi Sad, Biosense institute, Serbia

[P2.08]   **Insulin detection using plasmonic optical fiber chips: A benchmark**

Médéric Loyez[*], Hadrien Fasseaux, Christophe Caucheteur, Ruddy Wattiez, University of Mons, Belgium

[P2.09] **Development of innovative MIP based sensors for liquid biopsy**

Giulia Siciliano[*1], Elisabetta Primiceri[1], Maria Serena Chiriacò[1], Francesco Ferrara[1], Antonio Turco[1], Silvia Romano[2], Gianluigi Zito[2], Luca De Stefano[2], Valeria Nocerino[2], Luciano Velardi[3], Maria Assunta Signore[3], Marco Esposito[1], Giuseppe Gigli[1], [1]Institute of Nanotechnology National Research Council, Italy,[2]Eduardo Caianiello Institute for Applied Science and Intelligent Systems National Research Council, Italy,[3]Institute for Microelectronics and Microsystems National Research Council, Italy

[P2.10] **Random and site-direct immobilization study of antibodies against SARS-CoV-2 spike protein by combined optical-acoustic method**

Silvija Juciute[*1], Justina Liesyte[1], Vincentas Maciulis[2], Almira Ramanaviciene[1], Ieva Plikusiene[1,2], [1]Vilnius University, Lithuania,[2]State Research Institute Center for Physical Sciences and Technology, Lithuania

[P2.11] **Nanoscale memristive biosensors: Advancing proactive health monitoring of inflammatory markers**

Shashikant Pathak[*], Ioulia Tzouvadaki, Ghent University Department of Electronics and Information Systems, Belgium

[P2.12] **A point-of-use salivary allostatic load sensor**

Kiera Courts[*1,2], Alyssa Cramer[1,2], Sean Webb[1,2], Jorge Chavez[1], Trevor Tilly[1], [1]Air Force Research Laboratory 711th Human Performance Wing, USA,[2]UES Inc, USA

[P2.13] **Molecularly imprinted photonic crystal hydrogel-based smart sensor for the selective and sensitive colorimetric detection of Bisphenol A**

Sree Sanker S S[*1], Subin Thomas[2], Dhanya P Jacob[1], Savitha Nalini[3], K N Madhusoodanan[1], [1]Cochin University of Science and Technology, India,[2]St. Joseph's College, Moolamattom, India,[3]Sree Narayana College, Cherthala, India

[P2.14] **Rapid hormone test for on-site-analysis of aqueous samples**

Rosa Louisa Gehring[*], Veronika Riedl, Andreas Müller, Tilo Pompe, Leipzig University, Germany

[P2.15]　**A new tandem of lactate biosensor and pH probe to assess lactic acidosis in flow regime**

Juan José García Guzmán[*1], José Manuel Jiménez Heras[2], David López Iglesias[2], Rafael González Álvarez[2], Laura Cubillana Aguilera[3], Juan Jesús Fernández Alba[2], Carmen González Macías[2], José María Palacios Santander[3], [1]*University of Cadiz, Spain,*[2]*University Hospital of Puerto Real, University of Cadiz, Spain,*[3]*University of Cadiz, Spain*

[P2.16]　**Rapid and sensitive detection of ciguatoxins in fish, microalgae cultures and seawater**

Mònica Campàs[*1], Jaume Reverté[1], Shivangi Shukla[1], Greta Gaiani[1], Sandra Leonardo[1], Takeshi Tsumuraya[2], Masahiro Hirama[2], Naomasa Oshiro[3], Kyoko Kuniyoshi[3], Jean Turquet[4], Jorge Diogène[1], [1]*IRTA Marine and Continental Waters (AMiC), Spain,*[2]*Osaka Metropolitan University, Japan,*[3]*National Institute of Health Sciences, Kanagawa, Japan,*[4]*Centre Technique de Recherche et de Valorisation des Milieux Aquatiques (CITEB), France*

[P2.17]　**Triblock probe-polyA-probe electrochemical interfacial engineering for the sensitive analysis of RNAi plants**

Xue Yang[*], Lele Wang, Yanli Wen, Gang Liu, *Shanghai Institute of Measurement and Testing Technology, China*

[P2.18]　**Algorithmic mapping of bio-physiological signals to pleasure, arousal, and dominance in children with severe motor and communication impairments**

Caryn Vowles[*], T. Claire Davies, *Queen's University, Canada*

[P2.19]　**Low-cost portable microlens array for high-resolution bio-imaging and sensing applications**

Aniruddha Ray[*1], Somaiyeh Khoubafarin[1], Peuli Nath[1], Hannah Popofski[1,2], [1]*The University of Toledo, USA,*[2]*Eastern Michigan University, USA*

[P2.20]　**Automated microfluidic platform for PCR-based monitoring of the oral microbiome profile from mouthwash and oral swab samples**

Changyoon Baek[*], Hyejin Lee, Junhong Min, *Chung-Ang University, Republic of Korea*

[P2.21]　　**SAF-based optical biosensor with 3D-printed free-form optics for targeted explosives immuno-detection**

María Amparo Hernández García[*], Jérémy Bell, Michael G. Weller, Knut Rurack, *BAM Federal Institute for Materials Research and Testing, Germany*

[P2.22]　　**A paper-based dual function biosensor for point-of-care urine analysis**

Yujia Li[*], Yingqi Kong, Yixuan Li, Rica Asrosa, Bing Li, *University College London, UK*

[P2.23]　　**Intercellular neurotransmitter sensing platform utilizing probe-type microelectrode and patterned-3D cell culture plate**

Kyung Won Lee[*], Hoyeon Lee, Soo A Park, Hyun C. Yoon, *Ajou University Department of Molecular Science and Technology, Republic of Korea*

[P2.24]　　**Development of foodborne pathogenic bacteria sensor utilizing retroreflective Janus micro particular probe**

Hoyeon Lee[*], Kyung Won Lee, Soo A Park, Hyun C. Yoon, *Ajou University Department of Molecular Science and Technology, Republic of Korea*

[P2.25]　　**Research on deep sleep nucleus of simulated microgravity rats by micro-nano electrode arrays**

Juntao Liu[*,1,2], Hao Wang[1,2], Hanwen Cao[1,2], Meiqi Han[1,2], Yilin Song[1,2], Mixia Wang[1,2], Jinping Luo[1,2], Xinxia Cai[1,2], [1]*State Key Laboratory of Transducer Technology, Aerospace Information Research Institute, Chinese Academy of sciences, China,*[2]*University of Chinese Academy of Sciences, China*

[P2.26]　**Roll-to-roll manufactured "Lab-on-Foil" system with functional hydrogels for on-chip detection of periodontal pathogens**

Eva Melnik[*1], Vanessa Thoeny[1], Steffen Kurzhals[1], Jasmin Huber[1], Thomas Maier[1], Giorgio Mutinati[1], Primoz Skerbis[2], Stefan Schreck[2], Anja Haase[3], Laura Angermann-Krammer[3], Maria Belegratis[3], Barbara Stadlober[3], Georg Reischer[4], Johanna Kreuter[4], Claudia Kolm[4], Michael Heilmann[5], Franz Padinger[5], Nikolaus Ladenhauf[6], Max Sonnleitner[6], Rainer Hainberger[1], *[1]AIT Austrian Institute of Technology GmbH, Center for Health & Bioresources, Austria,[2]Bionic Surface Technologies GmbH, Austria,[3]JOANNEUM RESEARCH Forschungsgesellschaft GmbH, Austria,[4]TU Wien, Institute of Chemical, Environmental and Bioscience Engineering, IFA - Tulln, Austria,[5]SCIO Holding GmbH, Austria,[6]GENSPEED Biotech GmbH, Austria*

[P2.27]　**A microfluidic chip for generation of epithelial to mesenchymal transition (EMT) index based on cancerous extracellular vesicles**

Hyo-Il Jung[*], *Department of Mechanical Engineering, Yonsei University, Seoul, Republic of Korea,TheDABOM Inc., Republic of Korea*

[P2.28]　**An aptamer-molecularly imprinted polymer electrochemical sensor for bacteria detection in water**

Meltem Agar, Maisem Laabei, Hannah Leese, Pedro Estrela[*], *University of Bath, UK*

[P2.29]　**Nickel nanoparticles modified screen-printed electrodes as a novel non-enzymatic electrochemical sensor for cholesterol determination**

Radka Gorejová[*1], Ivana Šišoláková[1], Jana Shepa[1], Renáta Oriňaková[1,2], *[1]Pavol Jozef Šafárik University in Košice Faculty of Science, Slovakia,[2]Tomas Bata University in Zlin Centre of Polymer Systems, Czech Republic*

[P2.30]　**Comparative Assessment of Gold Nanoparticle--Antibody Conjugates with Two Differently Shaped Particles for Multimodal Colorimetric Lateral Flow Assay.**

Vinayak Sharma[*], *Technological University Dublin, Ireland*

[P2.31] **Voltammetric fingerprinting for Aβ peptides identification**

Aleksandra Tobolska[*1], Katarzyna Biernat[1], Nina Wezynfeld[1], Patrycja Ciosek-Skibińska[1], Małgorzata Jakubowska[2], Bogusław Baś[2], Wojciech Wróblewski[1], [1]*Warsaw University of Technology Faculty of Chemistry, Poland,*[2]*AGH University of Krakow Faculty of Materials Science and Ceramics, Poland*

[P2.32] **Real-time monitoring of vancomycin in human serum by long-range surface plasmon hydrogel aptasensor**

Koji Toma[*1], Yui Taguchi[2], Kenta Iitani[3], Takahiro Arakawa[4], Kohji Mitsubayashi[3], [1]*Shibaura Institute of Technology, Japan,*[2]*Tokyo Medical and Dental University, Japan,*[3]*Tokyo Medical and Dental University Institute of Biomaterials and Bioengineering, Japan,*[4]*Tokyo University of Technology, Japan*

[P2.33] **Gold leaf electrochemical biosensor utilizing flagellar filament for sensitive Ni detection**

Ivana Milosevic[*1], Éva Tóth[2], Ivana Kundacina[1], Hajnalka Jankovics[2], Vasa Radonic[1], [1]*University of Novi Sad, Biosense institute, Serbia,*[2]*University of Pannonia, Research Institute of Biomolecular and Chemical Engineering, Hungary*

[P2.34] **Development of a novel aptamer-based lateral flow biosensor for universal detection of dengue virus 3' UTR in LAMP assay**

Angelica Uy[*1], Sairille Naomi Maneja[2], Ferguie Solis[1], Hung-Wei Yang[3], Dharmatov Rahula Albano[1,2,4], [1]*The Graduate School, University of Santo Tomas, The Philippines,*[2]*Department of Chemistry, College of Science, University of Santo Tomas, The Philippines,*[3]*Department of Biomedical Engineering, National Cheng Kung University, Taiwan,*[4]*Research Center for the Natural and Applied Sciences, University of Santo Tomas, The Philippines*

[P2.35] **Development of a magneto-microfluidic device for highly controlled magnetic nanoparticles manipulation**

Adrien Geffrelot[*], Nessrine Jebari, David Bouville, Mehdi Ammar, Elisabeth Dufour-Gergam, *Center for Nanosciences and Nanotechnologies, France*

[P2.36] **Rapid detection of tetrodotoxin in pufferfish with a hybrid antibody-aptamer sandwich lateral flow test**

Ulises Guillermo Díaz-Avello[*1], M. Carmen Bermudo[1], Vasoula Skouridou[1], Mònica Campàs[2], Ciara K. O´Sullivan[1,3], [1]Universitat Rovira i Virgili, Spain,[2]Institute of Agrifood Research and Technology (IRTA), Spain,[3]Institució Catalana de Recerca i Estudis Avançats (ICREA), Spain

[P2.37] **Development of a method for separating pancreatic adenocarcinoma cells from complex biological samples based on the immunomagnetic method using a membrane protein (EpCAM) and newly discovered potential marker (Plectin-1)**

Patrycja Baranowska[*1], Jakub Trzcinski[1], Elzbieta Jastrzebska[1,2], [1]Centre for Advanced Materials and Technologies CEZAMAT, Warsaw University of Technology, Poland,[2]Warsaw University of Technology Faculty of Chemistry, Poland

[P2.38] **A combined electrokinetics-SERS approach for molecular and viral detection**

Shamim Azimi[*], Aristides Docoslis, Queen's University, Canada

[P2.39] **T cell in-vitro labeling by SPIONs for potential in-vivo MR image tracking for CAR-T therapy**

Kungao He[1], En Zhang[2], Mudan Guo[2], Doudou Xu[*2], [1]Department of Radiology, the First Affiliated Hospital of Army Medical University, China,[2]Chongqing Institute for Food and Drug Control, China

[P2.40] **Metal-decorated silicon nanowires for non-invasive lung cancer diagnosis using VOCs biomarkers: A DFT study**

José Eduardo Santana[*1], Ivonne Hernández-Hernández[1], Álvaro Miranda[2], Miguel Cruz-Irisson[2], Luis Antonio Pérez[1], [1]Instituto de Física, Universidad Nacional Autónoma de México, Mexico,[2]Instituto Politécnico Nacional, ESIME-Culhuacán, Mexico

[P2.41]　　**Two-dimensional VSe$_2$ nanoflakes as a sensing electrocatalyst for nitrobenzene determination**
Anastasios Papavasileiou[*1], Nikolas Antonatos[1], Jan Luxa[1], Lukas Dekanovsky[1], Roussin Lontio Fomekong[1,2], Zdenek Sofer[1], [1]University of Chemistry and Technology Prague, Czech Republic,[2]University of Yaounde I, Cameroon

[P2.42]　　**Gold nanocrystals–based electrochemical sensors for ascorbic acid detection**
Jana Shepa[*1], Ivana Šišoláková[2], Milan Sýkora[3], Radka Gorejová[2], Renáta Oriňaková[2], [1]Pavol Jozef Šafárik University in Košice, Slovakia,[2]Pavol Jozef Safarik University in Kosice, Slovakia,[3]Comenius University in Bratislava, Slovakia

[P2.43]　　**Rapid screening test for Streptococcus agalactiae infections. A step towards global intervention in perinatal infections**
Anaixis Del Valle[*1,2], Melania Mesa[1,2], Arnau Pallarès-Rusiñol[3], Mercè Martí[1], Bárbara Baró[4], Jofre Ferrer-Dalmau[3], Quique Bassat[5], Isabel Pividori[6,2], [1]Institute of Biotechnology and Biomedicine, Autonomous University of Barcelona, Spain,[2]Autonomous University of Barcelona Chemistry Department, Spain,[3]BioEclosion, Spain,[4]Barcelona Institute for Global Health, Spain,[5]Barcelona Institute for Global Health, Spain,[6]Institute of Biotechnology and Biomedicine, Autonomous University of Barcelona, Spain

[P2.44]　　**One-step fabrication of laser-induced metal nanoparticles/graphene electrochemical paper-based analytical device for point-of-care biosensing**
Ruya Shi[*], Li Zhang, Wing Cheung Mak, Department of Biomedical Engineering, The Chinese University of Hong Kong, Hong Kong

[P2.45]   **Bio-FET system for the detection of multiple urinary biomarkers: pH sensing**

Beatriz Sequeria-Antunes[*1,2,3], Ana S Viana[4], Nuno Marujo[2], Susana Cardoso[3], Hugo Alexandre Ferreira[1,2], [1]*University of Lisbon Institute of Biophysics and Biomedical Engineering, Portugal,*[2]*Exotictarget, Portugal,*[3]*INESC Microsystems and Nanotechnologies, Portugal,*[4]*Centro de Química Estrutural, Institute of Molecular Sciences, Departamento de Química e Bioquímica, Faculdade de Ciências, Universidade de Lisboa, Portugal*

[P2.46]   **Towards rapid detection of microplastic particles in human blood samples**

Monali Patel[*1], Lauren Ridler[2], Melanie Jimenez[3], Aaron Lau[4], Andrew Ward[1], [1]*University of Strathclyde Department of Civil and Environmental Engineering, UK,*[2]*University of strathclyde Department of Pure and Applied Chemistry, UK,*[3]*University of strathclyde Department of Biomedical Engineering, UK,*[4]*University of Strathclyde Department of Pure and Applied Chemistry, UK*

[P2.47]   **Smartgnostics - Global testing & diagnostics solutions for antimicrobial resistances**

Rodrigo Vieira[1], Pedro Alpuim[2], Carla Carvalho[2], Pieter De Beule[2], Laura Rodriguez-Lourenzo[2], Carlos Pinto[3], Luis Guimarães[4], Manuela Caniça[5], Ana Amaro[6], Sílvio Santos[7], Filipe Barbosa[8], Daniela Silva[*1], [1]*ALS Life Sciences Portugal, Portugal,*[2]*International Iberian Nanotechnology Laboratory, Portugal,*[3]*INEGI - Institute of Science and Innovation in Mechanical and Industrial Engineering, Portugal,*[4]*INESC TEC - Institute for Systems and Computer Engineering, Technology and Science, Portugal,*[5]*Instituto Nacional de Saúde Doutor Ricardo Jorge (INSA), Portugal,*[6]*Instituto Nacional de Investigação Agrária e Veterinária (INIAV), Portugal,*[7]*University of Minho Centre of Biological Engineering, Portugal,*[8]*SPMAQ - Soluções Projetos Máquinas, Portugal*

[P2.48]   **Mach-zehnder interferometer biosensors for food allergen detection**
Ali Kheir-aldine[*1], Hippolyte Durand[2], Guillaume Nonglaton[2], Charlotte Parent[2], Myriam Cubizolles[2], Patricia Laurent[2], Loïc Laplatine[2], [1]Univ. Grenoble Alpes, CEA-LETI, 38054 Grenoble cedex, France,[2]Univ. Grenoble Alpes, CEA-LETI, 38054 Grenoble cedex, France

[P2.49]   ***In silico* determination of recognition elements for food safety-biosensors**
Edward Mihr[*1], Katrina Campbell[2], Dimitrios Lamprou[1], [1]School of Pharmacy, Queen's University Belfast, UK,[2]Queen's University Belfast School of Biological Sciences, UK

[P2.50]   **Towards sensing of VOCs using on-chip refractive index sensors based on plasmonic TiN nanohole arrays**
Akant Sengül[*1], Sebastian Reiter[1], Christian Mai[2], Arwa Laroussi[1], Julia Efremenko[1], Davide Spirito[2], Agnieszka Anna Corley-Wiciak[2], Vladimir Mirsky[1], Christian Wenger[2], Inga Fischer[1], [1]Brandenburg University of Technology Cottbus-Senftenberg, Germany,[2]IHP GmbH - Innovations for High Performance Microelectronics, Germany

[P2.51]   **Terahertz metasensor for pigeon breeder's lung disease serological marker detection**
Deepak Kala[*1], Pradeep Tiwari[1], Sylwia Brzezińska[2], Barbara Garczewska[2], Ewa Augustynowicz-Kopeć[2], Monika Staniszewska[3], Maciej Sakowicz[1], [1]Institute of High Pressure Physics Polish Academy of Sciences, Poland,[2]National Tuberculosis and Lung Diseases Institute, Poland,[3]Warsaw University of Technology, Poland

[P2.52]   **Dual-mode shear horizontal / Rayleigh-like surface-acoustic-wave configuration on lithium niobate 64° Y-cut**
Francesco Lunardelli[*1], Matteo Agostini[2], Elena Corradi[1], Marco Cecchini[3], [1]SNS University, Italy,[2]INTA srl, Italy,[3]National Research Council Pisa Research Area, Italy

[P2.53]   **Laser initiated complex cell structures on chips towards the study of interaction between tumor cells and lymph nodes**

Marianneza Chatzipetrou[*1], Maria Chliara[1], Maria Dimadi[2], Stavroula Elezoglou[1], Katerina Tsilingiri[3], Apostolos Klinakis[3], Ioanna Zergioti[1], [1]*National Technical University Of Athens Institute of Communications and Computer Systems, Greece,*[2]*PhosPrint P.C., Lefkippos Technology Park, NCSR Demokritos Patriarchou Grigoriou 5' & Neapoleos 27, 15341 Athens, Greece,*[3]*Biomedical Research Foundation of the Academy of Athens, Greece*

[P2.54]   **Next-generation biosensing of forever chemicals for food safety and environmental management**

Diana Senovilla Herrero[*1], Heather Moore[2], Matthew Service[2], Sarah Helyar[1], Lenka Mbadugha[3], Katrina Campbell[1], [1]*Queen's University Belfast School of Biological Sciences, UK,*[2]*Agri-Food and Biosciences Institute, UK,*[3]*University of Aberdeen School of Biological Sciences, UK*

[P2.55]   **MIP-based electrochemical sensor for low molecular weight analyte detection**

Greta Pilvenyte[*], Sarunas Zukauskas, Alma Rucinskiene, Raimonda Boguzaite, Arunas Ramanavicius, Vilma Ratautaite, *State Research Institute Center for Physical Sciences and Technology, Lithuania*

[P2.56]   **Quantification of protease activity based on progressive degradation of single nano-layers of immobilized casein**

Yann Stolz[*], Hajar Yakout, Alexis Vlandas, Isabelle Jacques, *Zymoptiq, France*

[P2.57]   **Comparative analysis of wearable embroidered RTD and thermocouple temperature sensors for extreme environments: A case study in SCUBA diving**

Emmy Amers[*], Bethany Orme, David Wood, Yuyuan Shi, Hamdi Torun, Linzi Dodd, *Northumbria University, UK*

[P2.58]　　**Massive determination of enzyme activity by automatic color analysis of pH strips by triple-quad dipstick setup**

Ondřej Kereteš[*1], Martin Žofka[2], Miroslav Pohanka[1], [1]University of Defence in Brno, Czech Republic,[2]Charles University Faculty of Pharmacy in Hradec Kralove, Czech Republic

[P2.59]　　**Label-free reduced graphene oxide biosensor as a platform for virus detection**

JOSE ZUÑIGA[*1], RONALDO CHALLHUA[1], LARISSA AKASHI[1], Helena Beatriz de Carvalho Ruthner Batista[2], RICARDO MORATELLI[3], ERIKA SAEKI[4], ANA CHAMPI[1], [1]Federal University of the ABC, Brazil,[2]PASTEUR INSTITUTE, Brazil,[3]OSWALDO CRUZ FOUNDATION, Brazil,[4]Adolfo Lutz Institute, Brazil

[P2.60]　　**Affinity sensors based on conducting polymers**

Arunas Ramanavicius[*1,2], Maryia Drobysh[2], Viktorija Liustrovaite[3], Alma Rucinskiene[4], Vilma Ratautaite[4], Ieva Plikusiene[3], Almira Ramanaviciene[3], [1]Vilnius University, Lithuania,[2]State Research Institute Center for Physical and Technological Sciences, Lithuania,[3]Vilnius University, Lithuania,[4]State Research Institute Center for Physical Sciences and Technology, Lithuania

[P2.61]　　**Quartz crystal microbalance-based aptasensor for universal detection of dengue 3' untranslated region (UTR) in LAMP assay**

Dharmatov Rahula Albano[*], Francis Biñas, Switzell Quintos, Lovely Pearl Mary Anne Rabago, Francis Dominic Fajardo, University of Santo Tomas, The Philippines

[P2.62]　　**Optimization of a screen-printed carbon electrode-based DNA biosensor modified with magnetic nanoparticles for electrochemical detection of SARS-CoV-2 as a biomarker of COVID-19**

Tugba Ozer[*1], Nipapan Ruecha[2], Tirayut Vilaivan[2], Orawon Chailapakul[2], Charles S. Henry[3], [1]Yildiz Technical University, Turkey,[2]Chulalongkorn University, Thailand,[3]Colorado State University, USA

[P2.63] **The second life for unused COVID-19 vaccines: Application for biosensing**

Ieva Plikusiene[*1,2], Asta Luciunaite[3], Silvija Juciute[4], Vincentas Maciulis[5], [1]NanoTechnas - Center of Nanotechnology and Materials Science, Lithuania,[2]State Research Institute Center for Physical Sciences and Technology, Lithuania,[3]Institute of Biotechnology, Life Sciences Center, Vilnius University, Lithuania,[4]NanoTechnas - Center of Nanotechnology and Materials Science, Lithuania,[5]State Research Institute Center for Physical Sciences and Technology, Lithuania

[P2.64] **Employing $Ti_3C_2T_x$ MXenes for the advancement of an amperometric glucose biosensor**

Anton Popov[*], Viktorija Lisyte, Arnas Treimakas, Benediktas Brasiunas, Almira Ramanaviciene, *Vilnius University, Lithuania*

[P2.65] **Urinalysis with a fluorescent probe can differentiate diabetic kidney disease**

Takuji Iyama[*1], Tomoaki Takata[1], Kentaro Yamada[1], Hinako Hanada[2], Misaki Kubo[2], Sousuke Taniguchi[2], Ryoma Nishikawa[3], Yukari Mae[2], Katsuya Hikita[3], Hajime Isomoto[2], [1]ivision of Gastroenterology and Nephrology, Tottori University Faculty of Medicine, Japan,[2]Division of Gastroenterology and Nephrology, Tottori University Faculty of Medicine, Japan,[3]Tottori University kidney center, Japan

[P2.66] **Tailored reactor to induce the production of nanoparticles from precursor for a novel time-temperature integrator**

Changgeun Lee[1], Soohwan Lee[1], Wonyoung Heo[1], Umin Park[1], Gyuchang Mun[1], Sungmo Ahn[*1], Choongjin Ban[2], Seokwon Lim[1], [1]Gachon University, Republic of Korea,[2]University of Seoul, Republic of Korea

[P2.67]   **Mn3O4 nanozymes: Unveiling a promising material for catecholamine sensing**

Dhanya P Jacob[*1], Subin Thomas[2], Sree Sanker S S[3], Aldrin Antony[1,4], [1]*Centre of Excellence in Advanced Materials, Cochin University of Science and Technology, Cochin, Kerala, India,*[2]*Department of Physics, St. Joseph's College, Moolamattom Kerala, affiliated to M.G. University, Kerala, India,*[3]*Department of Instrumentation, Cochin University of Science and Technology, Kerala, India,*[4]*Department of Physics, Cochin University of Science and Technology Cochin, Kerala, India*

[P2.68]   **Olfaction-inspired non-invasive renal cancer diagnostics**

Susana Palma[*1,2], Joana Pinto[3,4], Carina Esteves[1,2], Inês Padrão[1,2], Efthymia Ramou[1,2], Guilherme Rebordão[1,2], Rita Alves[1,2], Carina Carvalho-Maia[5,6], Carmen Jerónimo[7,6], Rui Henrique[5,6,8], Paula de Guedes Pinho[3,4], Ana Cecília Roque[1,2], [1]*Associate Laboratory i4HB - Institute for Health and Bioeconomy, School of Science and Technology, NOVA University Lisbon, Portugal,*[2]*UCIBIO – Applied Molecular Biosciences Unit, Chemistry Department, NOVA School of Science and Technology, NOVA University of Lisbon, Portugal,*[3]*Associate Laboratory i4HB - Institute for Health and Bioeconomy, Department of Biological Sciences, Faculty of Pharmacy, University of Porto, Portugal,*[4]*UCIBIO – Applied Molecular Biosciences Unit, Department of Biological Sciences, Faculty of Pharmacy, University of Porto, 4050-313 Porto, Portugal,*[5]*Cancer Biology and Epigenetics Group, Research Center (CI-IPOP), Porto Comprehensive Cancer Center (P.CCC), Portuguese Oncology Institute of Porto (IPO Porto), Portugal,*[6]*Department of Pathology, Portuguese Oncology Institute of Porto (IPO Porto), P.CCC Porto Comprehensive Cancer Center, Portugal,*[7]*Cancer Biology and Epigenetics Group, Research Center (CI-IPOP), Porto Comprehensive Cancer Center (P.CCC), Portuguese Oncology Institute of Porto (IPO Porto), Paraguay,*[8]*Department of Pathology and Molecular Immunology, ICBAS-School of Medicine and Biomedical Sciences, University of Porto, Portugal*

[P2.69] **Gold nanoparticle-polymer composite thin films fabricated via cold physical plasma at atmospheric pressure for efficient bioreceptor immobilization and signal amplification in electrochemical biosensing**
David Rettke[*1], Zahra Nasri[1], Nadia Mora[2], Antje Quade[1], Laura Barillas[1], [1]*Leibniz Institute for Plasma Science and Technology eV, Germany,*[2]*Escuela de Ingeniería Química, Universidad de Costa Rica, Costa Rica*

[P2.70] **Sweat sensor for muscular fatigue monitoring: First results**
Alexandre CLOOTS[*], Sam GEORGES, Thierry BURY, Rudi CLOOTS, Pierre COLSON, Jean-Louis CROISIER, Jennifer DEWALQUE, Vincent D'ORIO, Stéphanie HODY, Jean-François KAUX, Christopher KUNE, Gabriel MAZZUCCHELLI, Karl TRAINA, Sabine WISLET, *University of Liège, Belgium*

[P2.71] **An electrodeposition selenium-based platform with swift time response, stability, and exceptional selectivity for detecting glutathione**
Georgina Alarcon-Angeles[*1], Martín Gómez[1], Marcela Hurtado[2], [1]*Metropolitan Autonomous University - Xochimilco Campus, Mexico,*[2]*Metropolitan Autonomous University - Xochimilco Campus, Mexico*

[P2.72] **Development of a fluorescent sensor based on molecularly-imprinted silica nanoparticles for rapid and selective detection of trimetazidine in urine samples**
Hüma Yılmaz[*1], Serdar Şanlı[2], [1]*University of Gazi, Turkey,*[2]*University of Ordu, Turkey*

[P2.73] **Caspase activity monitoring into biosensors for enhanced detection of cardiac allograft rejection**
Ibidapo Williams[*1,2], Boyang Chen[1], Richard Luxton[1,2], Janice Kiely[1,2], [1]*University of the West of England, UK,*[2]*University of the West of England Institute of Biosensing Technology, UK*

[P2.74] **ZnO nanocrystals for increased efficacy in isothermal DNA amplification using recombinase polymerase amplification (RPA)**
Thomas Draper[*], Richard Luxton, *University of the West of England, UK*

[P2.75]　**Magnetic detection of monocyte agglutination using magnetic particles.**

Olabimpe Adegbuyi[*1,2], James Whiting[1], Richard Luxton[2], Stephen Williams[2], Janice Kiely[2], [1]*University of the West of England, UK,*[2]*Institute of Biosensing Technology, UK*

[P2.76]　**Surface modification of immunosensors with a planar membrane scaffold for highly sensitive detection of health risk factors**

Masumi IIJIMA[*1], Yuna HAMASUNA[1], Yuko TAMURA[1], Taro ISA[1], Kanako KOBAYASHI[1], Tamaki KURORA[1], Yu HINASATO[1], Akiko TANABE[1], Shun'ichi KURODA[2], [1]*Department of Nutritional Science and Food Safety, Tokyo University of Agriculture, Japan,*[2]*SANKEN, Osaka University, Japan*

[P2.77]　**Smart bandage — An integrated diagnosis and treatment platform for chronic wound management**

Xueqi Wang[*], Han Wang, *Tsinghua University, China*

[P2.78]　**Isothermal NAAT-based biosensing assay for the rapid detection of UTI causing etiological agents**

Dakshita Sharma[*1], Dharitri Rath[1], Sumit Gandhi[2], Manish Ranjan[3], [1]*Indian Institute of Technology Jammu, India,*[2]*Council of Scientific & Industrial Research Indian Institute of Integrative Medicine, India,*[3]*All India Institute of Medical Sciences - Jammu, India*

[P2.79]　**Advancements in plant stress diagnostics using bio-sensing technology: A focus on stress hormone detection in xylem sap exudates**

Laurien Volkaert[*1,2], Sam Noppen[3], Dominique Schols[3], Jeroen Lammertyn[2], Bram Van de Poel[1], Dragana Spasic[2], [1]*KU Leuven, Molecular Plant Hormone Physiology Lab, Willem de Croylaan 42, 3001, Leuven, Belgium,*[2]*KU Leuven, Biosensors group – Lammertyn lab, Willem de Croylaan 42, 3001, Leuven, Belgium,*[3]*KU Leuven, Rega Institute for Medical Research, Laboratory of Virology and Chemotherapy, Herestraat 49, 3000, Belgium*

[P2.80]　**Development of a transparent hydrogel biosensor platform for detection of pancreatic lipase inhibitors towards obesity treatment**

Raúl Martínez-Baquero[*1,2], Yolanda Alacid[1,2], María José Martínez-Tomé[1], Javier Gómez[1], Francisco Montilla[2], Rocío Esquembre[1], Reyes Mateo[1], [1]IDiBE, Miguel Hernández University (UMH). Elche, Alicante, Spain,[2]Department of Chemistry-Physics and IUMA, University of Alicante (UA). Alicante, Spain

[P2.81]　**Optogenetics-based light-controlled dynamic bioassays**

Nadine Urban[*1,2,3], Maximilian Hörner[3], Wilfried Weber[3,4,5], Can Dincer[1,2], [1]University of Freiburg, FIT Freiburg Centre for Interactive Materials and Bioinspired Technology, Germany,[2]University of Freiburg, Department of Microsystems Engineering (IMTEK), Germany,[3]University of Freiburg, Faculty of Biology and Signalling Research Centres BIOSS and CIBSS, Germany,[4]INM – Leibniz Institute for New Materials Saarbrücken, Campus D2, Germany,[5]Saarland University, Department of Materials Science and Engineering, Campus D2, Germany

[P2.82]　**Point of care application of a novel plasmonic fiber-optic absorbance biosensor (P-FAB) to perform a rapid, automated immunoassay for detection of Δ-9-tetrahydrocannabinol in oral fluid**

Elana Edery[*1], Gautam Batra[1], Amenah Soherwardy[2], Haiyan Zheng[2], Divagar Murugan[3], V.V.R. Sai[3], Himanshu Bhatia[1], Joseph Seimetz[1], [1]Ricovr Healthcare, USA,[2]Rutgers The State University of New Jersey, USA,[3]Indian Institute of Technology Madras, India

[P2.83]　**The comparison of the sensitivity of electrochemical immunosensors for the detection of Chikungunya virus using SPCE, SPCE-AuNP, and SPCE-Ceria**

Shabarni Gaffar[*1], Yeni Hartati[1], Muhammad Yusuf[1], Irkham Irkham[2], Belia Salsabila[1], syifa tazkiya[1], Toto Subroto[1], [1]Padjadjaran University Faculty of Mathematics and Natural Sciences, Indonesia,[2]University of Padjadjaran Faculty of Medicine, Indonesia

[P2.84] **Synthesis and Characterizations of Hydroxyapatite-Lanthanum Strontium Cobalt Ferrite (HA-LSCF) for Carbon Dioxide Sensing**

ATIEK ROSTIKA NOVIYANTI[*1], Yeni Wahyuni Hartati[1], Muhamad Diki Permana[2,3], [1]*Padjadjaran University Faculty of Mathematics and Natural Sciences, Indonesia,*[2]*Special Educational Program for Green Energy Conversion Science and Technology, Integrated Graduate School of Medicine, Engineering, and Agricultural Sciences, University of Yamanashi, Kofu 400-8511, Japan, Japan,*[3]*Center for Crystal Science and Technology, University of Yamanashi, Kofu 400-8511, Japan, Japan*

[P2.85] **CRISPR/Cas12a-Based Electrochemical Biosensor Targeting D-loop mtDNA for the Detection of Food Adulterations**

Muhammad Ihda HL Zein[1], Ari Hardianto[1], Clianta Yudin Kharismasari[1], Irkham Irkham[1], Salma Nur Zakiyyah[1], Mehmet Ozsoz[2,1], Yeni Wahyuni Hartati[*1], [1]*Padjadjaran University Faculty of Mathematics and Natural Sciences, Indonesia,*[2]*Near East University Faculty of Engineering, Cyprus*

[P2.86] **Bioanalytical systems based on nanoporous membranes for diagnostic applications**

Alfredo de la Escosura-Muñiz[*], Celia Toyos-Rodríguez, David Valero-Calvo, *University of Oviedo, Spain*