

EUROPT(R)ODE VII – TUESDAY APRIL 6th POSTER SESSION

- P-2 **NOVEL DEVELOPMENTS IN CHROMOGENIC AND FLUOROGENIC RECEPTORS AND REAGENTS FOR CATION AND ANION SENSING**
R. Casasús, M. Comes, A. B. Descalzo, B. García Acosta, D. Jiménez, J. V. Ros Lis, R. Martínez Mánuez, F. Sancenón, and J. Soto.
Universidad Politécnica de València, Spain
- P-4 **ORGANIC-INORGANIC HYBRID MATERIALS FOR OPTICAL DETECTION OF ANIONIC AND NEUTRAL SPECIES**
Rosa Casasús,^a María Comes,^a Beatriz García Acosta,^a Ana B. Descalzo,^a Gertrudis Rodríguez-López,^a Félix Sancenón,^a María Dolores Marcos,^a Ramón Martínez-Mánuez,^a José V. Ros-Lis,^a Juan Soto,^a Luis Villaescusa,^a Pedro Amorós,^b Daniel Beltrán,^b Carmen Guillem,^b Julio Latorre^b and Knut Rurack^c
^{a,b}Universidad Politécnica de Valencia, Spain; ^cBundesanstalt für Materialforschung und –prüfung (BAM), Germany
- P-6 **OPTICAL SENSORS FOR CO₂**
R. Cannas, G. Zhylyak, T. Nezel, U.E. Spichiger-Keller
Center for Chemical Sensors, ETH Technopark, Switzerland
- P-8 **RESPIRATION-BASED TOXICOLOGICAL TESTS WITH MICROPLATES EQUIPPED WITH OPTICAL OXYGEN AND pH OPTODES**
S. Arain,^a C. Krause,^b G. T. John^b and I. Klimant^c
^aUniversity of Regensburg, Germany; ^bPreSens Precision Sensing GmbH, Germany; ^cUniversity of Technology of Graz, Austria
- P-10 **EUROPIUM TETRACYCLINE: A VERSATILE BIOSENSOR PROBE FOR TIME-RESOLVED FLUORESCENCE IMAGING APPLICATIONS**
M. Schäferling, M. Wu, Zhihong Lin and O. S. Wolfbeis
University of Regensburg, Germany
- P-12 **USE OF PLANAR OPTODES IN MARINE MICROBIOLOGY- OVERVIEW OF MOST RECENT APPLICATIONS**
L. Polerecký,^a U. Franke,^a E. Precht,^a C. Schröder,^b B. Grunwald,^a G. Holst,^c D. de Beer^a and I. Klimant^d
^aMax-Planck Institute for Marine Microbiology, Germany; ^bUniversity of Regensburg, Germany; ^cPCO AG Kehlheim, Germany; ^dTechnical University of Graz, Austria
- P-14 **INVESTIGATION INTO POLYMER-DIFFUSANT INTERACTIONS USING ATR-FTIR SPECTROSCOPY**
K. Flavin, B. Murphy, P. McLoughlin
Waterford Institute of Technology, Ireland
- P-16 **LONG-WAVELENGTH CHROMOGENIC SUBSTRATES FOR AN ABSORPTION-BASED ASSAY FOR SERINE PROTEASES**
V. Ramos, G. Zhylyak, D. Citterio, U. E. Spichiger-Keller
Center for Chemical Sensors, ETH Technopark, Switzerland
- P-18 **OPTICAL FIBER PH SENSORS FABRICATED USING THE ELECTROSTATIC SELF-ASSEMBLY METHOD**
F. J. Arregui,^a M. Huarte,^a J. Goicoechea,^a I. R. Matías^a and R. O. Claus^b
^aUniversidad Pública de Navarra, Spain; ^bFiber & Electro-Optics Research Center, Virginia Tech, USA
- P-20 **NOVEL CHEMICAL/BIOSENSOR PLATFORM BASED ON MULTIMODE INTERFERENCE COUPLERS**
K. Kribich,^a B. MacCraith, R. Copperwhite, B. Kolodziejczyk, H. Barry and J.M. Sabattie
^aDublin City University, Ireland
- P-22 **NOVEL HYBRID MATERIALS FOR LUMINESCENCE-BASED SENSING**
C. Higgins, A. Guckian, C. McDonagh, B. MacCraith, H. Vos^a
Dublin City University, Ireland; ^aDublin City University, Ireland
- P-24 **TRACE CHEMICAL GAS SENSORS USING MID-INFRARED QUANTUM CASCADE LASER SPECTROSCOPY**
J. Donohue,^a K. O'Dwyer,^a B. D. MacCraith,^a C. Charlton,^b and B. Mizaikoff^b
^aDublin City University, Ireland; ^bGeorgia Institute of Technology, USA

- P-26 **PARALLEL DETECTION OF R22 AND ITS SUBSTITUTES BY REFLECTOMETRIC INTERFERENCE SPECTROSCOPY**
M. Kasper, S. Busche, F. Dieterle, G. Gauglitz
 Eberhard-Karls-Universität Tübingen, Germany
- P-28 **ON-LINE MONITORING OF PH IN SHAKE-FLASK FERMENTATIONS**
Y. Kostov, H. Kermis, G. Rao
 University of Maryland Baltimore County, USA
- P-30 **OPTICAL BIOSENSING OF BIOAVAILABLE IRON IN THE SOUTHERN OCEAN USING A SOL-GEL ENCAPSULATED SIDEROPHORE**
 C. K. S. Chung Chun Lam,^a T. D. Jickells,^b D. J. Richardson^c and D. A. Russell^a
^aSchool of Chemical Sciences and Pharmacy, ^bSchool of Environmental Sciences, ^cSchool of Biological Sciences, University of East Anglia, U.K.
- P-32 **OPTOCHEMICAL FIBER BRAGG GRATING SENSORS BASED ON EVANESCENT-FIELD INTERACTION USING THIN-FILM TRANSDUCERS**
K. Schröder,^a W. Ecke,^a R. Willsch,^a S. Birkle^b
^aInstitute for Physical High Technology (IPHT), Jena, Germany; ^bSiemens AG, Germany
- P-34 **STUDIES ON THE USE OF SILICONE FOR DETECTION OF AROMATIC HYDROCARBONS IN WATER EMPLOYING NEAR INFRARED SPECTROSCOPY**
 J. S. Albuquerque,^a M. F. Pimentel,^a V. L. Silva,^a L.M. Raimundo Jr.,^b J. J.R. Rohwedder,^b and C. Pasquini^b
^aDepartamento de Engenharia Química, UFPE, Brazil; ^bGrupo de Instrumentação e Automação em Química Analítica, UNICAMP, Brazil
- P-36 **AN ORGANOPALLADIUM-PVC MEMBRANE FOR SULPHUR DIOXIDE OPTICAL SENSING**
 F. L. Alves,^a L.M. Raimundo Jr.,^a I. F. Gimenez,^b and O. L. Alves^b
^aGrupo de Instrumentação e Automação em Química Analítica and, ^bLaboratório de Química do Estado Sólido, UNICAMP, Brazil
- P-38 **CALCIUM OPTICAL NANOSENSORS**
A. Webster and J. W. Aylott
 University of Hull, U.K.
- P-40 **A SIMPLE ONLINE MONITORING SYSTEM FOR CONTINUOUS SENSING OF GLUCOSE IN BODY FLUIDS AND CULTIVATION MEDIUM**
A. Pasic, and I. Klimant
 Graz University of Technology, Austria
- P-42 **BIOSENSOR BASED ON SURFACE PLASMON INTERFEROMETRY INDEPENDENT ON VARIATIONS OF LIQUID'S REFRACTION INDEX**
 E.V. Alieva and V.N. Konopsky
 Russian Academy of Sciences, Russia
- P-44 **DEVELOPMENT OF CY5 – BASED OPTICAL IMMUNOSENSOR FOR VETERINARIAN DIAGNOSTICS**
M. Gomes da Silva, H. J. Cruz and A. G. Oliva
 IBET/ITQB- Instituto de Biologia Experimental e Tecnológica/Instituto de Tecnologia Química e Biológica, Portugal
- P-46 **PREPARATION AND APPLICATION OF SPHERICAL POROUS GLASS IN AN OPTICAL IMMUNOSENSOR FOR THE DETECTION OF TARGET ANTIGENS**
Ó. R. Silvestre, M. G. Silva, H. J. Cruz and A. G. Oliva
 ITQB – Instituto de Tecnologia Química e Biológica, Portugal
- P-48 **NON-DESTRUCTIVE MEASUREMENT OF RESIDUAL OXYGEN LEVELS IN PACKAGED FOOD USING THE OPTICAL OXYGEN SENSING**
F. C. O'Mahony,^a T. C. O'Riordan,^a N. Papkovskaia,^b V. I. Ogurtsov,^c J. P. Kerry,^b D. B. Papkovsky^a
^{a,b}University College Cork, Ireland; ^cNational Microelectronics Research Centre, Ireland
- P-50 **MODELING TEMPERATURE BEHAVIOUR OF PHASE-FLUORIMETRIC OXYGEN SENSORS USING PHYSICAL MODELS OF LUMINESCENT ACTIVE MEDIUM**
V. I. Ogurtsov,^a and D.B. Papkovsky^b
^aNational Microelectronics Research Centre (NMRC), Ireland; ^bUniversity College Cork, Ireland

- P-52 **AN OPTICAL FIBRE NITRIC OXIDE SENSOR FOR BIOLOGICAL SAMPLES**
H. Dacres and R. Narayanaswamy
DIAS, UMIST, U.K.
- P-54 **OPTICAL TEST STRIP FOR CITRATE: DESIGN AND CHARACTERISATION**
E. Arroyo-Guerrero, M. D. Fernández-Ramos and L.F. Capitán-Vallvey
Universidad de Granada, Spain
- P-56 **DETERMINATION BASED ON RESONANCE ENERGY TRANSFER**
F.J. López-González, M.D. Fernández-Ramos and L.F. Capitán-Vallvey
Universidad de Granada, Spain
- P-58 **DEVELOPMENT OF A FLOW-THROUGH ROOM TEMPERATURE PHOSPHORESCENCE OPTICAL SENSOR FOR THE DETERMINATION OF 1-NAPHTHYLACETIC ACID**
M. T. Fernández-Argüelles,^a B. Cañabate,^b A. Segura,^b A. Fernández,^b J. M. Costa,^a R. Pereiro^a and A. Sanz-Medel^a
^aUniversity of Oviedo and, ^bUniversity of Granada, Spain
- P-60 **AN INTRINSIC FIBRE OPTIC CHEMICAL SENSOR BASED ON LIGHT COUPLING PHENOMENON**
D. Stadnik,^{a,b} Z. Brzózka,^b W. Wróblewski^b and A. Dybko^b
^aInstitute of Electronic Materials Technology, Warsaw, Poland; ^bWarsaw University of Technology, Poland
- P-62 **ANIONS OPTOSENSING BY ROOM TEMPERATURE PHOSPHORESCENCE – ENERGY TRANSFER**
M.T. Fernández-Argüelles, J. M. Traviesa Álvarez, J. M. Costa, R. Pereiro and A. Sanz-Medel
^aUniversity of Oviedo, Spain
- P-64 **NEW OPTO-CHEMICAL AMMONIA SENSOR WITH DETECTION RANGE FROM 1 PPM TO 200 PPM**
N. Winkler,^a A. Krämer,^a D. Fassler,^b S. Pöhlmann,^b A. Steinke,^c D. Römhild,^c H.-G. Ortlepp,^c and A. Domanowski,^d
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- P-66 **DEVELOPMENT OF A FLOW-THROUGH PHOSPHORESCENCE OPTICAL SENSOR FOR THE DETERMINATION OF THE PLANT GROWTH REGULATOR BETA-NAPHTHOXYACETIC ACID**
S. Casado Terrones, A. Segura Carretero and A. Fernández Gutiérrez
Universidad de Granada, Spain
- P-68 **STUDY OF NOVEL FLUORESCENT CYANINE-BASED DYES IN PLASTICIZED PVC MEMBRANES TO DEVELOP INTEGRATED DEVICES**
L. Rivera, M. Puyol and J. Alonso
Universitat Autònoma de Barcelona, Spain
- P-70 **REFINEMENT OF A MATHEMATICAL MODEL FOR FICKIAN DIFFUSION TO ENHANCE POLYMER-MODIFIED SENSOR PERFORMANCE**
P. McLoughlin,^a B. Murphy,^a P. Kirwan,^b and K. Murphy^b
^aDepartment of Chemical and Life Science and, ^bDepartment of Physical and Quantitative Science, Waterford Institute of Technology, Ireland
- P-72 **FACTORS AFFECTING THE DIFFUSION OF HALOGENATED COMPOUNDS INTO POLYMERIC MEMBRANES**
P. McLoughlin,^{a*} V. Dobbyn,^{a,b} H. Steiner,^b P. Kirwan^a
^aWaterford Institute of Technology, Ireland; ^bVienna University of Technology, Austria
- P-74 **SICK HOUSE SYNDROME GAS MONITORING SYSTEM BASED ON NOVEL COLORIMETRIC REAGENTS FOR THE HIGHLY SELECTIVE AND SENSITIVE DETECTION OF FORMALDEHYDE, TOLUENE AND XYLENE**
Y. Suzuki,^a and K. Suzuki^{a,b}
^aKanagawa Academy of Science and Technology, Japan; ^bKeio University, Japan
- P-76 **IMMOBILIZED MICROALGAE ACCOUPLED TO FIBRE OPTICS: A FIRST APPROACH FOR TOXICITY ASSESMENT**
B. Debelius,^a L.M. Lubian,^b A. DelValls,^a and J.M. Forja^a
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- P-78 **TEMPERATURE AND INFLUENCE OF SALINITY ON THE RESPONSE OF AN OXYGEN SENSOR ($[Ru(dip)_3]Cl_2$) FOR ITS OPTICAL APPLICATION**
B. Debelius, A. DelValls, and J.M. Forja
 Universidad de Cádiz, Spain
- P-80 **A PROTOTYPE REAGENTLESS REGENERABLE BIOSENSING SYSTEM**
J.L. Medintz,^a G.P. Anderson, E.R. Goldman and J.M. Mauro^b
^aU.S. Naval Research Laboratory, Washington, USA; ^bMolecular Probes, USA
- P-82 **REVERSIBLE HYDROCARBON MONITORING WITH LUMINESCENT Ru(II) INDICATORS AND A FIBEROPTIC PHASE-SENSITIVE FLUOROMETER**
A. M. Castro,^a J. Delgado^b and G. Orellana^a
^aUniversidad Complutense de Madrid, Spain; ^bInterlab IEC, Spain
- P-84 **AMMONIUM SENSING WITH LUMINESCENT Ru(II) INDICATORS AND A FIBEROPTIC PHASE-SENSITIVE FLUOROMETER**
M. L. Contreras,^a M. C. Moreno-Bondi,^b M. Bedoya^c and G. Orellana^{a*}
^aLaboratory of Applied Photochemistry and ^bOptical Sensors Group, Universidad Complutense de Madrid, Spain; ^bInterlab IEC, Spain
- P-86 **INVESTIGATION OF THE FLUORESCENCE OF ISO-ALPHA ACIDS IN COMBINATION WITH LANTHANOIDS: TOWARDS A BITTERNESS SENSOR FOR BEER OR WORT**
R. Eberl, and J. Wilke
 Institut für Lebensmittel-Technik und Qualitätssicherung e.V., Germany
- P-88 **SELECTIVITY OF THE PSEUDOMONAS FLUORESCENS HK44 BIOSENSOR**
J. Trögl,^{a,c} S. Ripp,^b G. Kuncová,^a G.S. Sayler,^b K. Demnerová^c
^aInstitute of Chemical Process Fundamentals, Czech Republic; ^bCentre for Environmental Biotechnology, University of Tennessee, USA; ^cFaculty of Food and Biochemical Technology, Prague, Czech Republic
- P-90 **THE EXTENDED STUDY OF COLOURED INTERMEDIATES OF PCB DEGRADATION BY *Pseudomonas species 2***
P. Gavlasová,^a G. Kuncová,^b M. Macková^a
^aInstitute of Chemical process, Prague, Czech Republic; ^bCzech Academy of Sciences, Czech Republic
- P-92 **CONFOCAL SUPERCRITICAL ANGLE FLUORESCENCE (SAF) MICROSCOPY**
D. Verdes, T. Ruckstuhl, S. Seeger
 Universität Zürich, Switzerland
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P. Tobiška and J. Homola
 Academy of Sciences of Czech Republic, Czech Republic
- P-96 **A NEW SENSOR BASED ON SURFACE PLASMON RESONANCE IMAGING**
M. Pilarik and J. Homola
 Academy of Science of the Czech Republic, Czech Republic
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J. Dostálek, J. Homola, M. Miler
 Academy of Science of the Czech Republic, Czech Republic
- P-100 **TWO PHOTON FLUORESCENCE SENSORS BASED ON RESONANT GRATING WAVEGUIDE STRUCTURES**
S. Soria,^a T. Katchalski,^b E. Teitelbaum,^b A.A. Freisem^b and G. Marowsky^c
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- P-102 **NOVEL OPTO-CHEMICAL SENSORS FOR NON-INVASIVE OXYGEN MEASUREMENT IN TRANSPARENT PACKAGES OR CONTAINERS AND THEIR PERFORMANCE DURING APPLICATION**
H. Voraberger, A. Bizzarri, C. Dolezal, C. Konrad, H. Pressler and V. Ribitsch
 JOANNEUM RESEARCH, Austria

- P-104 **INVESTIGATION OF PRIMER ELONGATION AND DYE-SURFACE INTERACTIONS IN REAL-TIME**
A. Krieg,^a T. Ruckstuhl,^a and S. Seeger^a
^aUniversität Zürich, Switzerland
- P-106 **SENSITIVITY EVALUATION OF A MULTILAYERED SURFACE PLASMON RESONANCE BASED FIBER OPTIC SENSOR: A THEORETICAL STUDY**
B.D. Gupta and Anuj K. Sharma
 Indian Institute of Technology Delhi, India
- P-108 **A NEW PORTABLE FIBER OPTIC SENSOR FOR DETERMINING AND QUANTIFYING BENZO[A]PYRENE IN DRINKING WATER**
J.F. Fernández-Sánchez,^a A. Segura Carretero,^a M. Achaerandio-Alvira,^b C. Fernández-Valdivieso,^b I.R. Matías^b and A. Fernández Gutiérrez^a
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- P-110 **MODELLING OF SENSITIVITY FOR SENSORS BASED ON SURFACE PLASMON RESONANCE**
V. Chegel, Yu.Chegel and Yu.Shirshov
 National Academy of Sciences of Ukraine, Ukraine
- P-112 **ROBUST OPTICAL MOLECULAR SENSOR ARRAY FOR ASTROBIOLOGY APPLICATION**
O. Y.F. Henry,^a S. A. Piletsky,^a W. D. Grant,^b M. R. Sims^c & D. C. Cullen^a
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T. Allsop,^a T. Earthrowl,^b D.J. Webb^a, I. Bennion^a, M. Miller^c, B. Jones^b
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- P-116 **INTEGRATED OPTICAL REFRACTOMETER WITH A DIRECT DIGITAL OUTPUT**
R. Bernini
 CNR-IREA, National Research Council, Italy
- P-118 **LIQUID SENSOR BASED ON HOLLOW CORE ANTIRESONANT REFLECTING OPTICAL WAVEGUIDE**
S. Campopiano,^a R. Bernini,^b L. Zeni^a and P. M. Sarro^c
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- P-120 **DIFFUSE REFLECTANCE ANALYSIS OF SKIN LESIONS**
M. Cordo China,^{a,b} J.R. Sendra Sendra,^{a,b} S.M. López Silva,^{a,b} A. Viera Ramírez^c
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- P-122 **A NOVEL SALICYLIC ACID (SA) OPTICAL FIBRE SENSOR FABRICATION**
H. Chern Loh,^a M. Ahmad,^b M. Nasir Taib^c
^{a,b}Universiti Kebangsaan Malaysia, Malaysia; ^cUniversiti Teknologi Mara, Malaysia
- P-124 **HYBRID KNOWLEDGE REPRESENTATION (HKR) AS A NOVEL SOFTWARE SENSOR FOR SALICYLIC ACID (SA) DETERMINATION**
 H. Chern Loh,^a C. Meng Wong,^b M. Ahmad,^{a,*} M. Nasir Taib^c
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- P-126 **DEVELOPMENT OF FIBER OPTIC HYDROGEN SENSORS FOR TESTING NUCLEAR WASTE REPOSITORIES**
M. Alexandre,^a P. Corredera,^b M.L. Hernanz^b and J. Gutierrez-Monreal^a
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- P-128 **DISSOLVED OXYGEN SENSORS FOR CONTAMINATED AND AGGRESSIVE AQUEOUS ENVIRONMENTS**
R. N. Gillanders,^{a,b} M. C. Tedford,^a P. J. Crilly,^a and R. T. Bailey^b
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- P-130 **DOUBLE GRATING WAVEGUIDE STRUCTURES: 350-FOLD ENHANCEMENT OF TWO-PHOTON FLUORESCENCE APPLYING ULTRASHORT PULSES**
C. Kappel, A. Selle, M. A. Bader and G. Marowsky
Laser Laboratorium Goettingen e.V., Germany
- P-132 **FIBER OPTIC SENSOR WITH LIQUID CORE FOR CHEMICAL TRACE ANALYSIS**
P. Solařik
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