Plenary Lectures

PL1: Michele Parrinello, Istituto Italiano di Tecnologia, Atomistic Simulations, Center for Convergent Technologies, Genova, Italy

EuChemS Gold Medal 2020

"Ammonia Decomposition on Lithium Imide Surfaces: a new paradigm in heterogeneous catalysis"

PL2: Carol V. Robinson, Kavli Institute of Nanoscience Discovery, New Biochemistry Building, South Parks Road, UK **EuChemS Gold Medal 2022**

"A new phase for structural biology"

PL3: Lutz Ackermann, Institute for Organic and Biomolecular Chemistry, Georg-August-University Göttingen, Germany "Metallaelectro-Catalyzed Bond Activations"

PL4: Cristina Nevado, University of Zurich, Zurich, Switzerland

"Activating σ and π bonds with transition metals: mechanistic insights and asymmetric variants"

PL5: Clément Sanchez, Collège de France and Institute of Advanced Studies of Strasbourg, France "Nature-inspired integrative materials chemistry"

PL6: João Rocha, University of Aveiro, CICECO-Aveiro Institute of Materials, Department of Chemistry, Aveiro, Portugal "The importance of being porous: silicates and organic-inorganic hybrid materials"

PL7: Hanadi Sleiman, Department of Chemistry, McGill University, Montreal, Canada "DNA Nanostructures: design and biological properties"

PL8: Nicola Armaroli, National Research Council – Institute for Organic Synthesis and Photoreactivity (CNR-ISOF), Bologna, Italy

"A complex energy transition. The big picture from a chemical perspective"

PL9: Nazario Martín, Dpto de Química Orgánica, Facultad de Química, Universidad Complutense, Madrid, Spain; IMDEA-Nanociencia, Madrid, Spain

"Synthetic Chiral Molecular Nanographenes"

PL10: Victor Mougel, Department of Chemistry and Applied Biosciences

EuChemS Lecture Award 2020

"Bio-inspired strategies across multiple scales: application to overall CO2 reduction"

PL11: Silvia Osuna, Institut de Química Computacional i Catàlisi, Facultat de Ciències, Univ de Girona, Girona, Spain **EuChemS Lecture Award 2021**

"Can we rationally design efficient enzymes?"

PL12 e PL13: John C. Warner¹ and Paul Anastas²

August Wilhelm von Hofmann Denkmünze 2022

¹Zymergen Research, Cambridge, MA, USA; ²Center for Green Chemistry and Green Engineering, Yale University, New Heaven, CT, USA

"Green Chemistry: The Molecular Mechanisms of Sustainability"

ERC

ERC1: Sophie Beeren, Department of Chemistry, Technical University of Denmark, Kongens Lyngby, Denmark Technical University of Denmark, Kongens Lyngby, Denmark

"Enzyme-mediated dynamic combinatorial chemistry with cyclodextrins"

ERC2: Ardemis Boghossian, Ecole Polytechnique Fédérale de Lausanne, Switzerland

"Synthetic Biology-inspired Approaches for Engineering Optical Nanosensors"

ERC3: Larisa Florea, Trinity College Dublin, Ireland

"Bioinspired 3D Micro-Structures and Micro-vehicles – Design, Fabrication and Function"

ERC4: Hennie Valkenier, Université libre de Bruxelles, Engineering of Molecular NanoSystems, Bruxelles, Belgium "Dynamic Covalent Chemistry with Azines"

ERC5: Frank Biedermann, Karlsruhe Institute of Technology: Karlsruhe, Germany

"Towards Supramolecular Systems for Small-Molecule Diagnostics in Biofluids.

ERC6: Luca Dell'Amico, Department of Chemical Sciences, University of Padova, Padova, Italy

"Mechanistic investigations in light-driven synthetic chemistry - Making predictable the unpredictable"

ERC7: Roxanne Kieltyka, Department of Supramolecular and Biomaterials Chemistry, Leiden Institute of Chemistry, Leiden University, The Netherlands

"Squaramide-based supramolecular biomaterials"

ERC8: José J. Baldoví, Instituto de Ciencia Molecular (ICMol), University of Valencia, Paterna, Spain

"Tailoring spin waves in single-layer CrSBr by strain engineering"

ERC9: Giulio Ragazzon, Institut de Science et d'Ingénierie Supramoléculaires, Université de Strasbourg, CNRS, Strasbourg, France

"From molecular machines to chemical engines"

ERC10: Tomáš Slanina, Institute of Organic Chemistry and Biochemistry, AS CR, Prague, Czech Republic From Reversible Photoinduced Electron Transfer to Energy Storage

ERC11: Valentina Cauda, Department of Applied Science and Technology, Politecnico di Torino, Italy
A TrojaNanoHorse to fight cancer with stimuli-responsive, biomimetic and theranostic nanoparticles

ERC12: Luís Mafra, Department of Chemistry, University of Aveiro, Portugal

"Understanding CO2 capture mechanisms in porous adsorbents via solid state NMR spetroscsopy"

Theme A - Advances in Synthetic Organic Methodologies

Subtheme A1 - Synthetic Methodology

IL.A1.1: Marcos G. Suero, Institute of Chemical Research of Catalonia ICIQ Barcelona Institute of Science and Technology; Tarragona, Spain

"Catalytic Carbyne Transfer in Organic Synthesis"

IL.A1.2: Keinan Ehud, The Schulich Faculty of Chemistry, Technion-Israel Institute of Technology, Haifa, Israel

"Bio-inspired synthesis of spherical containers and bambusuril anion transporters"

IL.A1.3: Carlos Afonso, Faculty of Pharmacy, University of Lisbon, Portugal

"Synthetic transformations under flow conditions"

OC.A1.1: Dorian Didier, Ludwig-Maximilians Universität, München

"Divergent functionalization of four-membered heterocycles"

OC.A1.2: Samuel Suárez-Pantiga, Universidad de Burgos, Pza. Misael Bañuelos s/n, Burgos, Spain

"Dioxomolybdenum catalyzed C-N bond-forming reactions in reductive amination reactions with nitrocompounds"

OC.A1.3: Gianluigi Albano, Dipartimento di Chimica, Università degli Studi di Bari "Aldo Moro", Bari, Italy

"Infrared irradiation-assisted Pd-catalyzed dehydrogenative coupling of fluoroarenes with heteroarenes: a new frontier in double C–H activation"

OC.A1.4: Filipa Siopa, Sorbonne Université, Faculté des Sciences et Ingénierie, CNRS, Institut Parisien de Chimie Moléculaire, Paris, France; Research Institute for Medicines (iMed.ULisboa), Faculty of Pharmacy, Universidade de Lisboa, Portugal

"Combining photoflow of pyridinium salts with Pd-catalysis to access new aminocyclopentene"

OC.A1.5: Andrea Olmos, Organic Chemistry Department, University of Valencia, Spain

"New polypyrazolylborates complexes with increased electrophilicity and small catalytic pocket"

OC.A1.6: Joshua D Tibbetts, Department of Chemistry, University of Bath, UK

"Photocatalytic α-C-H Heteroarylation of Unprotected Primary Alkylamines"

OC.A1.7: G. Pupo, Chemistry Research Laboratory, University of Oxford, UK

"Asymmetric Nucleophilic Fluorination under Hydrogen Bonding Phase-Transfer Catalysis and beyond"

OC.A1.8: A. Sofia Santos, LAQV@REQUIMTE, Department of Chemistry, NOVA School of Science and Technology, Universidade Nova de Lisboa, Caparica, Portugal

"Exploring the facile synthesis of bis(3-indolyl)methanes derivatives"

OC.A1.9: João Macara, LAQV@REQUIMTE, Departamento de Química, Faculdade de Ciências e Tecnologia, Universidade Nova de Lisboa, Portugal

"Synthesis of sulfonyl hydrazides mediated by hypervalent iodine reagents"

OC.A1.10: Vani Verma, Department of Chemistry, University of British Columbia, Vancouver, Canada

"Toward the synthesis of Julandine and Cryptopleurine. One-pot sequential hydroamination to selectively access tri, tetra-, and penta-substituted pyridines"

OC.A1.11: Volochnyuk D.M., Enamine Ltd, Kyiv, Ukraine; Institute of Organic Chemistry, National Academy of Sciences of Ukraine, Kyiv, Ukraine; National Taras Shevchenko University of Kyiv, Kyiv, Ukraine

"Amino acids derived diazoketones - shelf stable reagents for organic synthesis"

Subtheme A2 - Green Chemistry

IL.A2.1: Berit Olofsson, Department of Organic Chemistry, Stockholm University, Sweden

"Atom-efficient diarylations through metal-free cascade reactions"

IL.A2.2: Jiwoong Lee, Department of Chemistry, University of Copenhagen, Denmark

"CO2-Mediated Processes"

OC.A2.1: Juliana G. Pereira, Research Institute for Medicines (iMed.ULisboa), Faculty of Pharmacy, Universidade de Lisboa, Portugal

"Preparation of aminals (and thioaminals) under mild conditions and their remarkable applications"

OC.A2.2: Lucía Álvarez-Miguel, Department of Organic and Inorganic Chemistry and Research Institute in Chemistry "Andrés M. del Río" (IQAR), Universidad de Alcalá, Madrid, Spain

"Upcycling of Abundant Fatty Acids to Form Cyclic Carbonates and their Use as Monomers in NIPU Synthesis"

OC.A2.3: Gianfranco Decandia, *Dipartimento di Chimica, Università degli Studi di Bari "Aldo Moro", Bari, Italy; Istituto per i Processi Chimico-Fisici CNR-IPCF, Dipartimento di Chimica, Bari, Italy*

"Palladium-Catalyzed Direct (Hetero)Arylation in solvent free condition assisted by Infrared Irradiation"

OC.A2.4: Alessio Dessì, Institute of Chemistry of Organometallic Compounds (CNR-ICCOM), Sesto Fiorentino, Italy

"Deep-Eutectic Solvents as sustainable media for the Pd-catalyzed direct arylation of thienyl-derivatives with (hetero)aromatic bromides under air"

OC.A2.5: M. Manuel B. Marques, LAQV-REQUIMTE, Department of Chemistry, School of Science and Technology, New University of Lisbon, Portugal

"On the Green road towards the synthesis of challenging N-heterocycles"

OC.A2.6: Yung-Sing WONG, Univ. Grenoble Alpes, CNRS UMR 5063, DPM, Grenoble, France

"Greener Pharmaceuticals: Short and Modular Enantioselective Organocatalyzed Synthesis of new BET Bromodomain Inhibitors with Anti-inflammatory Action"

Subtheme A3 - Reaction Mechanisms

IL.A3.1: Svetlana B. Tsogoeva, Organic Chemistry Chair I and Interdisciplinary Center for Molecular Materials (ICMM), Friedrich-Alexander-University of Erlangen-Nürnberg, Germany

"Multi-Step Domino Reactions: Access to Versatile Compounds for Material and Life Sciences"

IL.A3.2: Joost Reek, Homogeneous and Supramolecular Catalysis, Van t Hoff Institute for Molecular Sciences, Amsterdam "Rational approaches to design selective transition metal catalysts using supramolecular chemistry"

OC.A3.1: Polyssena Renzia, University of Turin, Via P. Giuria 7, Torino, Italy

"Turning on Blue Light on Carbopalladation: a Practical Access to Saturated Heterocycles at Room Temperature"

OC.A3.2: Marta Marin-Luna, Departamento de Química Orgánica, Facultad de Química, Regional Campus of International Excellence "Campus Mare Nostrum", Universidad de Murcia, Spain

"Homodimerization of isocyanides towards the elusive 1,4-diazabutatrienes"

OC.A3.3: Emanuele Azzi, University of Turin – Chemistry Department, Turin, Italy

"Visible Light Triggered Cascade Processes for the Synthesis of Saturated N-heterocycles"

OC.A3.4: Juan V. Alegre-Requena, Department of Chemistry, Colorado State University, Fort Collins, USA

"Phosphorus(V)-promoted Py-Py and CF3-Py ligand couplings and Hal-Py SNAr from phosphonium salts: emerging metal-free functionalization of nitrogen heterocycles"

OC.A3.5: Thomas Hansen, Department of Theoretical Chemistry, Vrije Universiteit Amsterdam, The Netherlands "Origin of the α -Effect in SN2 Reactions"

OC.A3.6: Bo Chen, Donostia International Physics Center, Donostia-San Sebastián, Spain; IKERBASQUE, Basque Foundation for Science, Bilbao, Spain

"High-pressure reaction profiles and activation volumes of 1,3-cyclohexadiene dimerizations computed by the extreme pressure-polarizable continuum model (XP-PCM)"

OC.A3.7: Pablo CHOURREU, Chimie ParisTech, PSL University, CNRS, Institute of Chemistry for Life and Health Sciences, Paris, France; M2i Development, Lacq, France.

"New eco-friendly pathways for the synthesis of insect pheromones by iron-catalyzed cross-coupling: development, industrial applications, and mechanistic aspects"

OC.A3.8: Christian Silvio Pomelli, Università di Pisa, Dipartimento di Farmacia, Italy

"Reactive Deep Eutectic Solvents (ReDESs): an underexploited option for organic chemistry"

Subtheme A4 - Supramolecular Chemistry

IL.A4.1: Werner Nau, Jacobs University Bremen, Germany

"The Chaotropic Effect as an Assembly Motif in Supramolecular Chemistry"

IL.A4.2: Christopher A. Hunter, Department of Chemistry, University of Cambridge, UK

"Synthetic Information Molecules"

OC.A4.1: Federico Begato, Dipartimento di Scienze Chimiche, Università degli Studi di Padova, Italy

"Straight from the bottle! Wine and juice dicarboxylic acids as templates for supramolecular cage self-assembly"

OC.A4.2: Tanja Huber, Institut für Anorganische Chemie, Universität Regensburg, Germany

"Hydrogen-bonding patterns of amidophosphine sulfides in solution and in the solid-state"

OC.A4.3: Vítor A. S. Almodôvar, LAQV-REQUIMTE, Department of Chemistry, University of Aveiro, Portugal

"Synthesis and characterization of new cationic diketopyrrolopyrroles with biological activity"

OC.A4.4: Martin Kotora, Department of Organic Chemistry, Faculty of Science, Charles University, Praha, Czech Republic

"[7]Helical Indenofluorenes: Their Enantioselective Synthesis and Applications"

OC.A4.5: A. Martínez-Cuezva, Dpto Química Orgánica, Facultad de Química, Universidad de Murcia, Spain

"Modulating the catalytic performance of prolinamide-based organocatalysts with the mechanical bond"

OC.A4.6: Giorgio Rizzo, Dipartimento di Chimica, Università degli Studi di Bari Aldo Moro, Bari, Italy

"Synthesis, characterization and polymerization of fluorinated dopamine: evaluation of structural features in bioinspired polydopamine"

OC.A4.7: Valentina lannace, Institut de Química Computacional i Catàlisi, Facultat de Ciències, Universitat de Girona, Spain

"Regioselective bis-functionalization of fullerene C70 via supramolecular masks"

OC.A4.8: Wolter F. Jager, Department of Chemical Engineering ChemE Delft University of Technology, The Netherlands "Flexible synthesis of functional perylene 3,4,9,10-tetracarboxylic acid derivatives using ester functionalities as solubilizing, protective and functional groups"

Subtheme A5 - Asymmetric Synthesis and Natural Products

IL.A5.1: Olivier Baudoin, University of Basel, Department of Chemistry, Basel, Switzerland

"Ring Construction via Palladium(0)-Catalyzed C-H Activation"

IL.A5.2: José Alemán, Organic Chemistry Department & Institute for Advanced Research in Chemical Sciences, Universidad Autónoma de Madrid, Spain

"Development of New Photocatalytic Reactions"

IL.A5.3: Janine COSSY, Molecular Chemistry and Catalysis, ESPCI Paris, CNRS, PSL University, France

"Power of Transition Metals Functionalization and Construction Heterocycles"

OC.A5.1: Bojana Srećo Zelenović, Faculty of Sciences, Trg Dositeja Obradovića 3, Novi Sad, Serbia

"Synthesis, cytotoxicity and SAR analysis of novel dephenylated (-)-goniofufurone analogues"

OC.A5.2: Kristína Plevová, *University Côte d'Azur, Institut de Chimie de Nice, UMR 7272 CNRS, Faculty of Sciences, Nice, France*

"Unusual enantioselectivity in silver-catalyzed intramolecular [4+2] cycloaddition reaction of amide-1,6-enynes"

OC.A5.3: George Kwesiga, University of Potsdam, Institut für Chemie, Potsdam, Germany

"Scope and Applications of 2,3-Oxidative Aryl Rearrangements for the Synthesis of Isoflavone Natural Products"

OC.A5.4: Sándor B. Ötvös, Institute of Chemistry, University of Graz, Austria; Center for Continuous Flow Synthesis and Processing (CC FLOW), Research Center Pharmaceutical Engineering GmbH (RCPE), Graz, Austria

"Multistep enantioselective flow synthesis of chiral active pharmaceutical ingredients: A journey towards scalability and sustainability"

OC.A5.5: Pep Rojo, Institute for Research in Biomedicine (IRB Barcelona), The Barcelona Institute of Science and Technology, Spain

"P-stereogenic ligands in the iridium-catalyzed asymmetric hydrogenation of 2,3-diaryl allyl amines. Preparation of tetrahydroquinoline and tetrahydroisoquinoline scaffolds"

Theme B - Metal Containing Compounds and Solids: Properties and Applications

Subtheme B1 - Organometallic Chemistry

IL.B1.1: Emma Gallo, University of Milan, Italy and Istituto di Chimica dei Composti OrganoMetallici, ICCOM-CNR, Fiorentino, Italy

"Synthesis of heterocyclic compounds promoted by porphyrin-based catalytic systems"

IL.B1.2: Reiner Anwander, Institut für Anorganische Chemie, Eberhard Karls Universität Tübingen, Germany

"New Horizons in Metal-Methyl Chemistry"

IL.B1.3: Alexander M. Kirillov, Centro de Química Estrutural, Institute of Molecular Sciences, Instituto Superior Técnico, Universidade de Lisboa, Portugal

"Bioactive Metal-Organic Networks for Antimicrobial Applications"

OC.B1.1: Savvas N. Georgiades, Dept. of Chemistry, University of Cyprus, Nicosia, Cyprus

"Pd-Catalyzed Photoactivated Late-Stage C-H Functionalization of Biginelli/Suzuki-Derived Substrates for Generating Medicinally-Relevant Compound Libraries"

OC.B1.2: Tanja Hirschhausen, Paderborn University, Paderborn, Germany

"Capability of cyclometaled iron(III)-complexes for photocatalytic water splitting"

OC.B1.3: V. Wowk, Chimie ParisTech, PSL University, CNRS, Institute of Chemistry for Life and Health Sciences, Paris France

"Importance of two-electron processes in Fe-catalyzed aryl-(hetero)aryl cross-couplings"

OC.B1.4: Jessica Rodriguez, Laboratoire Hétérochimie Fondamentale et Appliquée, Université Paul Sabatier/CNRS UMR 5069, Toulouse, France

"Au(III) Complexes: From Structure Analysis to Reactivity Studies"

OC.B1.5: Alessandro Aliprandi, Università di Padova, Padova, Italia

"Understanding self-assembly of luminescent Pt(II) complexes: synthesis and properties"

Subtheme B2 - Multimetallic systems

IL.B2.1: Carlos Salgueiro, FCT-NOVA, New University of Lisbon

"Modulation of the iron properties in multiheme cytochromes for sustainable green-energy alternatives"

IL.B2.2: Thomas Fässler, Department Chemistry, Technical University of Munich, Germany

"Search Strategy for Novel Superionic Solid-State Lithium-Ion Conductors – Lithium-Phosphido Trielates and Tetrelates"

OC.B2.1: Jacopo Tessarolo, Dept. of Chemistry, TU Dortmund University, Germany

"Self-Assembly of Multifunctional Coordination Cages"

OC.B2.2: Simon Tricard, Laboratoire de Physique et Chimie des Nano-Objets, INSA, CNRS, Université de Toulouse, Toulouse, France

"Spin crossover in Fe(triazole)-Pt nanoparticle self-assembly structured at the sub-5 nm scale"

Subtheme B3 - Molecular Magnets

IL.B3.1: Richard Winpenny, Department of Chemistry, The University of Manchester, Oxford Road, United Kingdom "From Rings to Nanostructures"

OC.B3.1: Piotr Świder, Department of Analytical Chemistry, Faculty of Chemistry, University of Gdansk, Gdansk, Poland

"Amino – functionalized Supermagnetic Fe₃O₄ Nanoparticles. Synthesis and interaction with the silver ion"

OC.B3.2: Ilyes Mahti, CEA, DES, ISEC, DMRC, Univ Montpellier, Marcoule, France

"Effect of metal complexation on the DOTA radiolysis"

OC.B3.3: Roberta Puglisi, Institute for Polymers Composites and Biomaterials - National Research Council (IPCB-CNR), Catania, Italy

"Hybrid magnetic nanoparticles coated with Molecularly Imprinted Polymers for hazardous pollutants sequestration from water"

Subtheme B4 - Inorganic Interfaces

IL.B4.1: Steven De Feyter, KU Leuven, Department of Chemistry, Belgium

"Controlling self-assembly and reactivity on surfaces"

IL.B4.2: Henrik Birkedal, Department of Chemistry and iNANO, Aarhus University, Denmark;

"Bone biomineralization studies by X-ray diffraction based 2D and 3D imaging"

IL.B4.3: Maria del Carmen Gimenez Lopez, Center for Research in Biological Chemistry and Molecular Materials (CiQUS), University of Santiago de Compostela, Spain

"Advanced Energy Materials for Sustainable Future"

OC.B4.1: J.C. García-Mesa, Department of Analytical Chemistry, Faculty of Sciences, University of Málaga, Spain

"New methodologies to characterize ZnO nanoparticles in cosmetic samples"

OC.B4.2: Tobias Götz, Institut für Anorganische Chemie, Universität Regensburg, Germany

"Tailor-Made Modification of Siloxanes and Investigation of the Reactivity of Cyclic Five-Membered Diaminosilanes"

OC.B4.3: Ivan Kodrin, Department of Chemistry, Faculty of Science, University of Zagreb, Croatia

"Rational design of porous organic materials based on azo, azoxy and azodioxy linkages for the selective adsorption of CO2 over N2"

OC.B4.4: Bilal Javed, School of Food Science and Environmental Health, College of Sciences and Health, Technological University Dublin, Dublin, Ireland; Nanolab, FOCAS Research Institute, Technological University Dublin, Dublin, Ireland

"Size and Shape Controllable Synthesis of Seedless Gold Nanoparticles for the Development of Immunochromatographic Assay"

OC.B4.5: Eric Pasquinet, CEA-DAM Le Ripault, Monts, France

"Detection of hydrogen peroxide vapours with a fluorescent dioxazaborocane: molecular insight into the mechanism"

Subtheme B5 - Porous Materials

IL.B5.1: Christian Serre, Institut des Matériaux Poreux de Paris (IMAP), ESPCI Paris, Ecole Normale Supérieure de Paris, CNRS, PSL University, France

"Towards green synthesis and applications of robust MOFs"

IL.B5.2: Katharina M. Fromm, University of Fribourg, Department of Chemistry, Fribourg, Switzerland

"Coordination polymers as toolbox for a panoply of applications: from antimicrobial properties via clay-like behavior to detection, sensing and separation"

IL.B5.3: Michael Zaworotko, Depart. of Chemical Sciences and Bernal Institute, University of Limerick, Limerick, Ireland "The "Chemistree" of porous solids"

OC.B5.1: Moisés L. Pinto, CERENA, Dep. Engenharia Química, Instituto Superior Técnico, Universidade de Lisboa, Portugal

"Tuning Cellular Biological Functions Through the Controlled Release of NO from new MOF structures"

OC.B5.2: Franck Oswalda, University of Fribourg, Department of Chemistry, Fribourg, Switzerland

"The development of new luminescent MOFs for molecular detection"

OC.B5.3: Fatemeh Keshavarz, Department of Physics, School of Engineering Science, LUT University, Lappeenranta, Finland

"Metal-organic framework formation from [Fe4S4] clusters and its prospects for gas adsorption"

OC.B5.4: Alexander Elliott, WestCHEM, School of Chemistry, The University of Glasgow, UK

"Engineering porosity in molecular nanocontainers: From molecular sieving to catalysis"

OC.B5.5: Abeer Al Mohtara, Instituto Superior Técnico, Departamento de Engenharia Química, CERENA, Universidade de Lisboa, Portugal

"Robust MOFs for the Selective VOCs Capture Under Ambient Conditions"

OC.B5.6: Maksym Karamash, Department of Chemistry, University of Fribourg, Switzerlandl

"Rates of Extracellular Electron Transfer in *Geobacter sulfurreducens* Wild Type and Mutants. Experiments in the Resting and the Growth Phase"

Theme C - Chemistry Meets Biology

Subtheme C1 - Chemical Biology

IL.C1.1: Oliver Seitz, Department of Chemistry, Humboldt-Universität zu Berlin, Germany

"Live cell labelling of proteins and carbohydrates by templated chemistry"

IL.C1.2: Christian A. Olsen, Center for Biopharmaceuticals and Department for Drug Design and Pharmacology, Faculty of Health and Medical Sciences, University of Copenhagen, Denmark

"Chemical Tools for Investigating Histone Deacetylase (HDAC) Enzymes"

IL.C1.3: Edward W. Tate, Imperial College London, Depart. of Chemistry, Molecular Sciences Research Hub, London, UK "Chemical Probes enabling Drug Discovery"

IL.C1.4: Matthew Baker, CTR, MERLN, Fac. Health, Medicine and Life Sciences, Maastricht University, Netherlands "Macromolecular design for 3D hydrogel biomaterials"

IL.C1.5: Marina Rubini, O' Brien Centre for Science, Belfield, University College Dublin, Ireland

"The use of proline analogues in protein engineering and design"

OC.C1.1: Justine V. Schwarte, Department of Chemistry, University of Fribourg, Switzerland

"Blue, photo-stable and non-cytotoxic dies, with antimicrobial properties"

OC.C1.2: Moser, P., University of Grenoble Alpes, CNRS, DPM, UMR 5063, Grenoble, France

"A disulfide-based self-immolative linker as prodrug approach for the release of carboxylic acids in cells"

OC.C1.3: P. Klahn, Technische Universität Braunschweig, Institute of Organic Chemistry, Braunschweig, Germany; University of Gothenburg, Department of Chemistry and Molecular Biology, Göteborg, Sweden

"Inspired by nature's design: Biomimetic enterobactin analogues for antimicrobial drug conjugates"

OC.C1.4: Hannes Mikula, Institute of Applied Synthetic Chemistry, TU Wien, Vienna, Austria

"'Exit the Cube': Next-Level Chemical Tools for Ultrafast Bioorthogonal Bond-Cleavage"

OC.C1.5: Gustavo P. Maia, Centro de Química Estrutural – Institute of Molecular Sciences, Universidade de Lisboa, Lisbon, Portugal

"Why nucleosides in meteorites? An approach based on mechanochemical studies"

OC.C1.6: Thacilla I. Menezes, Research Center in Chemistry (CIQ-UP), Faculty of Sciences of the University of Porto, Portugal

"Dithiocarbazate-Loaded Nanostructured Lipid Carriers: Preparation, physicochemical characterization and environmental safety assessments"

OC.C1.7: Claudia Bonfio, Institut de Science et d'Ingénierie Supramoléculaires (ISIS), Strasbourg, France

"Towards the emergence of modern cells"

OC.C1.8: Alejandro Gutiérrez-González, Centro Singular de Investigación en Química Biológica y Materiales Moleculares (CiQUS, Santiago de Compostela, Spain

"Unconventional bioorthogonal strategies based on transition metal catalysis"

OC.C1.9: Edit Brodszkij, Aarhus University, Interdisciplinary Nanoscience Center (iNANO), Aarhus University, Aarhus Denmark

"Polymer – lipid hybrid vesicles made of poly(cholesteryl methacrylate) containing amphiphilic block copolymers"

OC.C1.10: Jens Frackenpohl, Research & Development, Weed Control - Bayer AG, Crop Science Division, Industriepark Höchst, Frankfurt am Main, Germany

"A quantum of solace for crops - New lead structures against drought stress interacting with ABA receptor proteins via bioisosterism concepts"

OC.C1.11: Irene Boya del Teso, Organic Chemistry Department, University of Salamanca, Spain

"Hypoxia-activated cancer pro-drugs: a new molecular trigger"

OC.C1.12: Sonsoles Martín-Santamaría, Center for Biological Research "Margarita Salas", CSIC, Madrid, Spain.

"Exploring immunity and bacterial resistance from the computational side"

OC.C1.13: Wiktor Szymanski, Medical Imaging Center, UMCG, University of Groningen, The Netherlands

"Photopharmacology: tools, applications, and structures"

Subtheme C2 - Sensors and Diagnostic

IL.C2.1: Donal O'Shea, Royal College of Surgeons in Ireland (RCSI), University of Medicine and Health Sciences, Chemistry Department, Dublin, Ireland

"REAL-TIME NEAR INFRARED FLUORESCENCE IMAGING: RESEARCH TOOLS WITH THE POTENTIAL FOR CLINICAL USE"

IL.C2.2: Pedro M. P. Gois, Research Institute for Medicines (iMed.ULisboa) Pharmacy Faculty, Universidade de Lisboa, Portugal

"New Chemistries for Stimuli-Responsive Targeting Drug Conjugates"

OC.C2.1: Laura Buccoli, School of Chemical Engineering, University of Birmingham, Birmingham, UK

"Surface-confined pyrene-based fluorescence sensors for highly sensitive saccharide detection"

OC.C2.2: A. M. G. Silva, LAQV/REQUIMTE, Departamento de Química e Bioquímica, Faculdade de Ciências da Universidade do Porto, Portugal

"Rosamine dyes: from synthesis to the preparation of functional materials for optical sensing applications"

Subtheme C3 - Biomolecules: Synthesis and Applications

IL.C3.1: Jalila Simaan, BiosCiences, iSm2, CNRS, Aix Marseille Université, Marseille, France

"Copper-containing monooxygenases: from enzymatic systems to bioinspired models"

IL.C3.2: Christelle Hureau, CNRS Toulouse, Université Toulouse III – Paul Sabatier, France

"Polyanions to counteract the detrimental interaction between Cu(II)/Zn(II) and the Alzheimer's-related amyloid-β peptide"

IL.C3.3: Manuel Aureliano, FCT and CCMAR Universidade do Algarve, Faro, Portugal

"Polyoxovanadates with biological and biomedical activities"

OC.C3.1: Á. L. Fuentes de Arriba, Organic Chemistry Department, University of Salamanca, Spain

"New biomimetic receptors for biomolecules"

OC.C3.2: Alexandra Borges, *LAQV – REQUIMTE, Departamento de Química e Bioquímica, Faculdade de Ciências, Universidade do Porto, Portugal*

"Improvement of the physicochemical properties of flavylium dyes using cyclodextrins for Photodynamic Therapy"

OC.C3.3: Cristina M. Cordas, LAQV, REQUIMTE, Department of Chemistry, NOVA School of Science and Technology, FCT NOVA, Universidade NOVA de Lisboa, Portugal

"A newly discovered Dyp-type peroxidase from a marine actinobacterium immobilization and electrochemical characterization"

OC.C3.4: Gianluca Maria Farinola, Dipartimento di Chimica, Università degli Studi di Bari "Aldo Moro", Bari, Italy

"Functional biohybrid nanomaterials from diatoms microalgae"

OC.C3.5: Celine Nieuwland, Department of Theoretical Chemistry, Vrije Universiteit Amsterdam, The Netherlands

"B-DNA Structure and Stability: Insights from Quantum Chemical Analyses"

OC.C3.6: Sainas S., Department of Science and Drug Technology, University of Torino, Italy

"MEDS433 a Novel and Potent human Dihydroorotate Dehydrogenase (hDHODH) Inhibitor, Induces Differentiation and apoptosis of Acute Myeloid Leukemia."

OC.C3.7: Takehiro Kato, University of Geneva, Geneva, Switzerland

"Cyclic Thiosulfonates for Thiol-Mediated Uptake: Cascade Exchangers, Transporters, Inhibitors"

OC.C3.8: Boris Vauzeilles, Université Paris-Saclay, CNRS, Institut de Chimie des Substances Naturelles, UPR 2301, Gifsur-Yvette, France

"New borinic probes for fast detection and imaging of hydrogen peroxide"

OC.C3.9: A.M. Oliveira-Brett, University of Coimbra, CEMMPRE, Department of Chemistry, Coimbra, Portugal

"Amyloid-ß peptides interaction with curcumin: AFM and voltammetric characterization"

OC.C3.10: Erica Del Grosso, University of Rome Tor Vergata, Via della Ricerca Scientifica, Rome, Italy

"Dissipative control of DNA-based nanodevices and nanostructures through strand-displacement reaction"

OC.C3.11: R. C. Curley, Dublin City University, School of Chemical Science, Dublin, Ireland

"Phototoxicity of Membrane Permeable Ru(II) Polypyridyl Peptide Conjugates in Cancer and non-Cancer cell lines"

OC.C3.12: Estela Sánchez-Santos, Faculty of Chemical Sciences, University of Salamanca, Spain

"Targeting tryptophan in undruggable proteins"

OC.C3.13: András Perczel, MTA-ELTE Protein Modeling Research Group & Laboratory of Structural Chemistry and Biology, Eötvös Loránd University, Hungary

"Understanding Oncogenic kRas Cycle through Structure and Multiple Time-scale Dynamics Gyula Pálfy1, Orsolya Tőke,2 Dóra K. Menyhárd1, György Keserű3 András Perczel"

OC.C3.14: Bruno Henriques, LAQV-REQUIMTE, Department of Chemistry, University of Aveiro, Portugal

"ACCUMULATION (AND IMPACTS) OF RARE EARTHS IN MARINE MACROALGAE: AN ALTERNATIVE SOURCE OF CRITICAL RAW MATERIALS?"

OC.C3.15: Georgios Alachouzos, Centre for Systems Chemistry, Stratingh Institute for Chemistry, Faculty for Science and Engineering, University of Groningen, The Netherlands

"Computational Design, Synthesis and Photochemistry of Cy7-PPG, an Efficient NIR-activated Photolabile Protecting Group for Therapeutic Applications"

OC.C3.16: Simona Ranalloa, Department of Chemical Science and Technologies, University of Rome Tor Vergata, Italy; Department of Chemistry and Biochemistry, University of California, USA

"Protein-Protein communication mediated by an antibody-responsive DNA nanodevice"

OC.C3.17: Michele Stasi, Technical University of Munich, Department of Chemistry, Germany

"Regulating the dynamic folding of a DNA-hairpin at the expense of a small, molecular fuel"

OC.C3.18: Sanjiv Prashar, COMET-NANO Group. Department of Biology and Geology, Physics and Inorganic Chemistry, ESCET, Universidad Rey Juan Carlos, Móstoles (Madrid), Spain

"Synthesis of a theranostic platform based on fibrous silica nanoparticles for the enhanced treatment of triplenegative breast cancer promoted by a combination of chemotherapeutic agents"

OC.C3.19: Susana Soares, REQUIMTE/LAQV, Departamento de Química e Bioquímica, Faculdade de Ciências da Universidade do Porto, Portugal

"Interactions of phenolic compounds within oral cavity: deepening the structure-activity to understand astringency mouthfeels"

OC.C3.20: Vercruysse W., *Analytical and Circular Chemistry, CMK, IMO, Hasselt University, Diepenbeek, Belgium* "Bridging the gap between biochar's physicochemical characteristics and plant growth"

OC.C3.21: Ana Marta de Matos,_Centro de Química Estrutural, Institute of Molecular Sciences, Faculdade de Ciências, Universidade de Lisboa, Portugal

"Innovation in the Development of Polyphenol C-Glucosides with Disease-Modifying Effects against Alzheimer's Disease"

OC.C3.22: Jing Yi, ISIS, University of Strasbourg, France

"A Nonenzymatic Analog of Pyrimidine Nucleobase Biosynthesis"

Subtheme C4 - Bioinorganic Chemistry

IL.C4.1: Serena DeBeer, *Max Planck Institute for Chemical Energy Conversion, Mülheim an der Ruhr, Germany* "Making and breaking bonds: Spectroscopic studies of energy converting enzymes"

OC.C4.1: Alex H. Miller, Department of Chemistry - University of York, Heslington, York, United Kingdom "Immobilisation of redox-reversible artificial metalloenzymes"

OC.C4.2: Sofia R. Pauleta, *Microbial Stress Lab, UCIBIO, DQ, NOVA School of Science and Technology, NOVA University Lisbon, Portugal.* Associate Laboratory i4HB -Institute for Health and Bioeconomy, NOVA School of Science and Technology, NOVA University Lisbon, Portugal

"Bactericidal activity of new NHC carbenes and their Cu(I) and Ag(I) complexes against pathogenic bacteria"

OC.C4.3: Alexander Hoffmann, RWTH Aachen University, Institute of inorganic Chemistry, Germany

"Obtaining a Molecular Movie via in Operando Raman spectroscopy: Catecholate Formation after Phenolate Attack at a Tyrosinase Model"

Theme D: Colloids and Materials

Subtheme D1 - Assemblies, Aggregates and Interfaces

IL.D1.1: Mihir Dass, Fakultät für Physik and Center for NanoScience, Ludwig-Maximilians-Universität München, Germany "DNA-assembled functional materials"

IL.D1.2: Tibor Kudernac, Stratingh Institute for Chemistry, University of Groningen, The Netherlands

"Supramolecular Polymers with Life-Like Mechanical Functions"

IL.D1.3: M. Lucia Curri, Department of Chemistry University of Bari and Italian National Research Council CNR IPCF, Bari, Italy.

"Tailoring surface chemistry of colloidal nanomaterials for life science applications"

OC.D1.1:-Iryna Danylo, University of Chemistry and Technology in Prague, Prague, Czech Republic

"Controlled nanofabrication of 2D material supported catalysts using electron microscope"

OC.D1.2: Carlos Lodeiro, BIOSCOPE Group, LAQV@REQUIMTE, Chemistry Department, NOVA School for Science and Technology, NOVA University Lisbon, Portugal; PROTEOMASS Scientific Society, Caparica, Portugal

"Preparation Multifunctional 3D-Gold and Pt nanostructures using the Green and Supramolecular Chemistry principles"

OC.D1.3: Clémence Chinaud-Chaix, Laboratoire de Physique et Chimie des Nano-Objets, Toulouse, France; Laboratoire d'informatique de Paris Nord, Villetaneuse, France

"Binary supercrystal assembly controlled by ligand effects"

OC.D1.4: Jakob Reichstein, Friedrich-Alexander-Universität Erlangen-Nürnberg, Professorship for Inorganic Chemistry, Erlangen, Germany

"Communicating supraparticles: smart additives to foster materials' intelligence"

OC.D1.5: Angelo Nicosia, Department of Chemical Sciences, University of Catania, Italy

"Supramolecular porphyrin-based flags in a thermal gradients wind"

OC.D1.6: Rita Gelli, Department of Chemistry "Ugo Schiff" and CSGI, University of Florence, Sesto Fiorentino, Italy

"Shedding light on biologically relevant colloidal hybrid calciprotein particles: effect of proteins and stabilizing agents"

OC.D1.7: Gaëlle Morandi, Normandie Univ, INSA Rouen, Univ Rouen, CNRS, PBS, Rouen, France

"Hybridization of poly(oxazoline) and PEO-based amphiphilic copolymers into thermo-sensitive mixed micelles of tunable cloud point"

OC.D1.8: Ermelinda Maçôas, Centro de Química Estrutural and Institute of Molecular Science, Instituto Superior Técnico, Universidade de Lisboa, Portugal

"Two-photon absorption in 0D carbon nanomaterials from nanographenes to graphene quantum dots and carbon nanodots"

OC.D1.9: Rzonsowska Monika, Faculty of Chemistry and Centre for Advanced Technologies, Adam Mickiewicz University in Poznań, Poland

"Synthesis and assembly properties of selected T8 and DDSQ silsesquioxanes ligands"

OC.D1.10: Ghibom Bhak, Department of Chemical Engineering, University of Salamanca, Spain

"Adhesive Peptide Derived from

-Synuclein that Directs the Nanocomposite Assembly of Polydopamine-Core Gold Nanoparticles-Satellite Applicable for Cancer Therapy"

OC.D1.11: Ilaria Clemente, Department of Biotechnology, Chemistry and Pharmacy, University of Siena, Italy & Center of Colloids and Surface Science (CSGI), Italy

"Compartmentalized algal-based nanocarriers as vectors for antioxidants: structural and functional characterization"

Subtheme D2 - Nanomaterials and Nanostructures

IL.D2.1: Wojciech Bury, Faculty of Chemistry, University of Wrocław, Poland

"Searching for porous materials for sorption, separation, and catalysis - from non-covalent systems to porous organic polymers"

IL.D2.2: David Portehault, Sorbonne Université, CNRS, Laboratoire de Chimie de la Matière Condensée de Paris (LCMCP), Paris, France

"Molten salts to address the solid-state chemistry of nano-objects"

IL.D2.3: Jorge Perez Juste CINBIO and Department of Physical Chemistry, University of Vigo, Spain

"Hybrid Plasmonic thin-films for SERS-based sensing in solution and in gas phase"

OC.D2.1: Joana Vaz-Ramos, Institut de Physique et Chimie des Matériaux de Strasbourg (IPCMS), UMR-7504 CNRS-Université de Strasbourg, France

"Water depollution of toxic organic compounds using magnetic graphene composite adsorbents"

OC.D2.2: Leonardo Curti, Sorbonne Université, CNRS, Institut Parisien de Chimie Moléculaire (IPCM), Paris, France

"Molecule-driven control of magnetic anisotropy in superparamagnetic iron oxide nanoparticles"

OC.D2.3: Biagio Todaro, National Enterprise for NanoScience and NanoTechnology (NEST) Laboratory, Scuola Normale Superiore, Pisa, Italy

"Pioglitazone nanoparticles: synthesis optimization and FLIM characterization"

OC.D2.4: Andrea Brunelli, DAIS - Department of Environmental Sciences, Informatics and Statistics, Ca' Foscari University of Venice, Italy

"Influence of dispersion protocols on multicomponent nanomaterials properties and toxicity in the context of safe by design approach"

OC.D2.5: Liva Dzene, Institut de Science des Matériaux de Mulhouse, CNRS, UMR 7361, Université de Haute-Alsace, Université de Strasbourg, Mulhouse, France

"Functionalization of synthetic saponite: addition of anion exchange property"

Subtheme D3 - Theory meets experiments- predicting properties of materials

IL.D3.1: Giovanni M. Pavan, Department of Applied Science and Technology, Politecnico di Torino, Italy and Department of Innovative Technologies, University of Applied Sciences and Arts of Southern Switzerland, Polo Universitario Lugano, Switzerland

"Computational approaches towards bioinspired dynamic materials"

IL.D3.2: Aran Garcia-Lekue, Donostia International Physics Center, San Sebastian, Spain

"Tailoring magnetic and topological fingerprints in graphene nanoribbons"

IL.D3.3: Matthieu Verstraete, University of Liege, Belgium

"Spectroscopy and transport in defected 2D materials"

OC.D3.1: Jordi Poater, Departament de Química Inorgànica i Orgànica & IQTCUB, Universitat de Barcelona, Barcelona, Spain; ICREA, Barcelona, Spain

"Cage-...Cage- interaction: Boron cluster-based noncovalent bond and its applications in solid-state materials"

OC.D3.2: C. Lionello, Department of Applied Science and Technology, Politecnico di Torino, Italy

"Toward Chemotactic Supramolecular Nanoparticles: From Autonomous Surface Motion Following Specific Chemical Gradients to Multivalency-Controlled Disassembly"

OC.D3.3: Jacopo Cardellini, Department of Chemistry "Ugo Schiff", CSGI, University of Florence, Italy

"Membrane Phase Drives the Assembly of Gold Nanoparticles on Biomimetic Lipid Bilayers"

OC.D3.4: Annalisa Cardellini, Politecnico di Torino, Torino, Italy

"Unsupervised machine learning of intrinsic structural dynamics in simple-to-complex micelles"

OC.D3.5: Kai S. Exner, University Duisburg-Essen, Germany

"Theoretical Description of the Oxygen Evolution Reaction: Quo Vadis?"

Subtheme D4 - Organic-Inorganic Hybrids

IL.D4.1: Miriam Unterlass, University of Konstanz, Department of Chemistry, Germany

"Direct Access to Organic-Inorganic Hybrid Materials through Hydrothermal Synthesis"

IL.D4.2: Felipe Gándara, Materials Science Institute of Madrid - CSIC, Madrid, Spain

"Exploiting the role of metal atoms in MOFs with main group elements and arrangements of multiple cations."

IL.D4.3: Marinella Striccoli - CNR-IPCF SS Bari, Bari, Italy

"Nanocrystal Coupled Dimers and Hybrid Nanostructures"

OC.D4.1: Marlène Saulais, Univ. Grenoble Alpes, CNRS, Grenoble-INP, LGP2, Grenoble, France

"Biobased and UV- sensitive nanoparticles"

OC.D4.2: Franziska Miller, Department of Chemistry and Pharmacy, Inorganic Chemistry, Friedrich-Alexander-University Erlangen-Nürnberg (FAU), Erlangen, Germany

"Hybrid inorganic organic luminescent supraparticle taggants with switchable dual level ID"

OC.D4.3: Beata Dudziec, Faculty of Chemistry and Centre for Advanced Technologies, Adam Mickiewicz University in Poznan, Poland

"Are Silsesquioxanes Susceptible to be Part of Hybrid Ligands?"

OC.D4.4: Carlos Baleizão, Centro de Química Estrutural, Institute of Molecular Sciences, Department of Chemical Engineering, Instituto Superior Técnico, Universidade de Lisboa, Portugal

"Smart hybrid silica nanocarriers with finely tuned structure for control release"

OC.D4.5: Helena I. S. Nogueira, CICECO and Department of Chemistry, University of Aveiro, Portugal

"Polyoxometalate hybrid materials: effects on the photoluminescent properties of lanthanopolyoxometalates"

Subtheme D5 - Nanoparticles: synthesis and applications

OC.D5.1: Leonardo Scarabelli, Institute of Materials Science of Barcelona (ICMAB-CSIC), Barcelona, Spain

"Surface lattice plasmon resonances by direct surface growth of gold nanoparticles in ordered arrays"

OC.D5.2: Gerard McGlacken, University College Cork, Cork, Ireland

"Designer Pd nanoparticles for reductive amination using hydrogen: Now one of the best methodology for Reductive Amination?"

OC.D5.3: Monica Tonelli, Department of Chemistry "Ugo Schiff" and CSGI, University of Florence, Sesto Fiorentino, Florence, Italy

"Halloysite nanotubes as nanocontainers in binder materials"

OC.D5.4: Igor Zhitomirsky, Department of Materials Science and Engineering, McMaster University, Main St.West, Hamilton, Ontario, Canada

"Colloidal methods for the fabrication of advanced electrodes for supercapacitors"

OC.D5.5: Natércia C.T. Martins, CICECO-Aveiro Institute of Materials, Department of Chemistry, University of Aveiro, Portugal

"Development of hydrophobic paper-based substrates by inkjet printing for SERS detection of pesticides"

OC.D5.6: Demetra Giuri, Dipartimento di Chimica Giacomo Ciamician, Alma Mater Studiorum, Università di Bologna, Italy

"Peptide-based low-molecular-weight gels as versatile and functional materials"

OC.D5.7: Francesca Ridi, Department of Chemistry "Ugo Schiff" and CSGI, University of Florence, Sesto Fiorentino, Italy "Magnesium phosphate-based bone cements: physico-chemical study and colloidal approaches to tailor their properties towards orthopedic applications"

OC.D5.8: Teresa Guaragnone, Department of Chemistry "Ugo Schiff" and CSGI, Sesto Fiorentino (FI), Italy

"pH responsive pHEMA/PAA hydrogel for the capture of Copper Ions and Corrosion Removal: implication in Cultural Heritage Fields"

OC.D5.9: Massimo Bonini, Department of Chemistry "Ugo Schiff" and CSGI, University of Florence, Sesto Fiorentino, Florence, Italy

"3D printing of magnesium-based cements: towards the preparation of bioceramics"

OC.D5.10: Badetti Elena, *DAIS - Department of Environmental Sciences, Informatics and Statistics, University Ca' Foscari of Venice, Italy*

"Influence of Amino Acids on the Antibacterial Activity of Copper Oxide Nanoparticles"

OC.D5.11: Ana C. Estrada, CICECO-Aveiro Institute of Materials, Department of Chemistry, University of Aveiro, Portugal "Visible-light driven BiVO4 photocatalysts for the degradation of contaminants of emerging concern"

OC.D5.12: ?????????

Theme E: Biomaterials and Medicinal Chemistry

Subtheme E1 - Drug Design and Discovery

IL.E1.1: Ana Rita C. Duarte, LAQV/REQUIMTE, Department of Chemistry, NOVA School of Science and Technology, FCT NOVA, Caparica, Portugal

"Formulation of therapeutic deep eutectic systems targeting current challenges in pharmaceutical sciences"

IL.E1.2: Elisabetta Groaz, Medicinal Chemistry, Rega Institute for Medical Research, KY Leuven, Belgium

"Nucleoside phosphonate prodrugs as prominent source of hepatitis B virus (HBV) inhibitors"

IL.E1.3: Gilles Gasser, Chimie ParisTech, PSL University, CNRS, Institute of Chemistry for Life and Health Sciences, Paris, France

"Towards Selective Delivery of Novel Metal-Based Photosensitizers for Anticancer Photodynamic Therapy"

OC.E1.1: Silva KHODJOYAN, Institut de Chimie des Substances Naturelles, CNRS, Université Paris Saclay, Gif-sur-Yvette, France

"Targeting respiratory syncytial virus replication by antiviral molecules"

OC.E1.2: Kesić Jelena, University of Novi Sad, Faculty of Sciences, Department of Chemistry, Biochemistry and Environmental protection, Novi Sad, Serbia

"Synthesis and SAR study of novel cytotoxic butanolide"

OC.E1.3: Bengt Erik Haug, University of Bergen, Department of Chemistry, Bergen, Norway

"Design and synthesis of novel ligands for the flavin mononucleotide riboswitch"

OC.E1.4: Joana Oliveira, Laboratório Associado para a Química Verde – REQUIMTE, Departamento de Química e Bioquímica, Faculdade de Ciências, Universidade do Porto, Portugal

"Photoactivated cell-killing amino-based flavylium compounds"

OC.E1.5: Ana Rita Franco, Department of Biotechnology and Biosciences, University of Milano-Bicocca, Milano, Italy

"Development of New Toll-Like Receptor 4-directed adjuvants and Clarification of their Mechanism of Action"

OC.E1.6: Tran Dieu Hang, Vrije Universiteit Brussel (VUB), Department of Analytical Chemistry, Applied Chemometrics and Molecular Modelling - FABI, Brussels, Belgium

"Structural investigation of human cystine/glutamate antiporter Sxc- using homology modeling with multiple templates and molecular dynamics simulations"

OC.E1.7: Elizabeth A. Lopes, Research Institute for Medicines (iMed.ULisboa), Faculty of Pharmacy, Universidade de Lisboa, Lisbon, Portugal

"Spirooxadiazoline oxindole: a new antiplasmodial chemotype with dual-stage activity"

OC.E1.8: Á. L. Fuentes de Arriba, Organic Chemistry Department, University of Salamanca, Salamanca, Spain

"Synthesis Of Antineoplastic Pro-Drugs Activated Under Hypoxia Conditions"

Subtheme E2 - Drug Delivery

IL.E2.1: Christoph E Hagemeyer, Nanobiotechnology Laboratory, Australian Centre for Blood Diseases, Central Clinical School, Monash University, Victoria, Australia

"Development of novel diagnostics and antibody-drug-conjugates using a combination of click chemistry and enzymatic ligation"

IL.E2.2: Elena Aznar, School of Industrial Engineering, Universitat Politècnica de Valencia, Spain

"Gated materials for drug delivery and biomedical applications"

OC.E2.1: A.P. Capêto, Universidade Católica Portuguesa, CBQF - Centro de Biotecnologia e Química Fina — Laboratório Associado, Escola Superior de Biotecnologia, Porto, Portugal

"Synthesis of bio-based polyester from microbial lipidic residue for biomedical application"

OC.E2.2: Giulia Mugnaini, CSGI & Department of Chemistry "Ugo Schiff", University of Florence, Sesto Fiorentino, Florence, Italy

"Photocross-linked gelatin methacryloyl microparticles prepared by double emulsion method for drug delivery"

Subtheme E3 - Metals in Medicine

IL.E3.1: Nils Metzler-Nolte, Ruhr University Bochum, Bochum, Germany

"A Bioorganometallic Journey from Peptide Bioconjugates to Novel Metal-based Antibiotics"

IL.E3.2: Anne-Kathrin Duhme-Klair, Department of Chemistry, University of York, UK

"Siderophores and their potential applications in the development of antimicrobials"

Subtheme E4 - Biopolymers, Hydrogels and Processing

IL.E4.1: Veronica I. Dodero, Bielefeld University, Germany

"Supramolecular Medicine: From basic research to gluten-related disorders"

IL.E4.2: J. F. Mano, Department of Chemistry, CICECO — Aveiro Institute of Materials, University of Aveiro, Portugal

"Macromolecular design in natural-origin hydrogels for tissue engineering applications"

IL.E4.3: Takashi Hayashita, Department of Material and Life Sciences, Sophia University, Tokyo, Japan

"Design and Function of Nanostructure Probes for Bacteria Discrimination"

OC.E4.1: Wiebke Schnettger, TU Dortmund, Dortmund, Germany

"Tailor-Made, Self-Healing Hydrogels For Biomedical Applications"

OC.E4.2: Lucie Mašková, University of Chemistry and Technology – Department of Chemical Engineering, Prague, Czech Republic

"Nature-based 3D bioprinted films for controlled in-situ synthesis of bactericides"

OC.E4.3: João M. M. Rodrigues, CICECO – Aveiro Institute of Materials, Department of Chemistry, University of Aveiro, Portugal

"Bioinspired Tunable Laminarin Biomaterials for Biomedical Applications"

OC.E4.4: Cláudia G. Silva, LSRE-LCM – Laboratory of Separation and Reaction Engineering - Laboratory of Catalysis and Materials, Faculty of Engineering, University of Porto, Portugal; ALICE – Associate Laboratory in Chemical Engineering, Faculty of Engineering, University of Porto, Portugal

"Carbon xerogels as a purification platform for L-asparaginase purification"

OC.E4.5: Pascal Lienig, Institute of organic chemistry, Leibniz University Hannover, Germany

"Dextrans, pullulan and lentinan, new scaffold materials for use as hydrogels in tissue engineering"

Subtheme E5 - Diagnostics and Nanotherapeutics

IL.E5.1: Teresa Pellegrino, Istituto Italiano di Tecnologia (IIT), Genova, Italy

"Engineering Magnetic Nano-platforms to Combine Magnetic Hyperthermia with other Therapeutic Treatments for Tackling Cancer"

OC.E5.1: Patrícia Rijo, Research Center for Biosciences & Health Technologies (CBIOS), Universidade Lusófona de Humanidades e Tecnologias, Lisboa, Portugal; Instituto de Investigação do Medicamento (iMed.ULisboa), Faculdade de Farmácia, Universidade de Lisboa, Portugal

"Natural royleanones as building blocks for a Drug Delivery Platform based on Self-assembled Nanoparticles"

OC.E5.2: M. C. Sportelli, Chemistry Department, University of Bari "Aldo Moro", Bari, Italy

"ZnO nanoparticles as effective antivirals against SARS-CoV-2"

OC.E5.3: Gruzman Arie, Bar-Ilan University, Webb street 1, Ramat-Gan, Israel

"A leukocyte transmigration inhibitor: a novel drug candidate for the treatment of auto-immune diseases"

OC.E5.4: María Sancho-Albero, Department of Molecular Biochemistry and Pharmacology, Istituto di Ricerche Farmacologiche Mario Negri IRCCS, Milano, Italy

"Extracellular vesicle-coated organosilica nanoparticles as targeted delivery nanocarriers"

OC.E5.5: Ma Xin, Institut des Matériaux Poreux de Paris, Ecole Normale Supérieure, ESPCI, Paris, France

"Understanding and controlling the toxicity and stability of MIL-100(Fe) toward effective drug-gene dual delivery carrier for anticancer therapy"

OC.E5.6: Alessandro Ajó, Università degli Studi di Milano, via Festa del Perdono, Milano, Italy

"Nanovectors for proteins release and barrier crossing"

OC.E5.7: João Borges, CICECO – Aveiro Institute of Materials, Department of Chemistry, University of Aveiro, Aveiro, Portugal

"Supramolecular design of hybrid biopolymer/peptide soft multicomponent biomaterials for regenerative medicine"

OC.E5.8: María de los Ángeles Ramírez, Université de Strasbourg, CNRS, Institut de Physique et Chimie des Matériaux de Strasbourg, UMR 7504, Strasbourg, France

"Theragnostic agents for breast cancer treatment: design of Iron Oxide Nanoparticles for multimodal therapies strategies"

Subtheme E6 - Molecular Sensors

IL.E6.1: Dirk-Peter Herten, Institute for Cardiovascular Sciences, School of Chemistry and Centre of Membrane Proteins and Receptors (COMPARE), University of Birmingham, United Kingdom

"Make them blink! - A chemistry approach to advanced fluorescence microscopy"

OC.E6.1: Maria Antonietta Casulli, Department of Materials and Life Science, Sophia University, Tokyo, Japan

"Cyclodextrin Supramolecular Complexes Based on Specific Bonding Groups for the Selective Detection of Human Metabolites"

OC.E6.2: Rute A. Pereira, Departamento de Física and CICECO – Aveiro Institute of Materials, University of Aveiro, Aveiro, Portugal

"Nanomagnetic logic gates for cellular hyperthermia"

OC.E6.3: Matthias Portius, Universität Leipzig, Institute of Biochemistry, Leipzig, Germany

"Synthesis of sulfamethoxazole derivates for coupling to hydrogel microparticles in biosensing applications"

Theme F: Catalysis

Subtheme F1 - Organo and Metal Homogenous Catalysis

IL.F1.1: Jose L. Vicario, Department of Organic and Inorganic Chemistry, University of the Basque Country, Bilbao, Spain "Exploring new reactivity patterns through the organocatalytic activation of small— and medium—sized carbocycles"

IL.F1.2: Manuel Orlandi, University of Padova, via Marzolo, 1, 35131, Padova, Italy

"Enantioselective α-Arylation of Ketones via a Novel Cu(I) Bis(phosphine) Dioxide Catalytic System"

IL.F1.3: John F. Bower, Department of Chemistry, University of Liverpool, United Kingdom

"New Electrophilic Amination Strategies for N-Heterocycle Synthesis"

OC.F1.1: Sofia M. Bruno, CICECO-Aveiro Institute of Materials, Department of Chemistry, University of Aveiro, Portugal "Selective isomerization of α -pinene oxide to campholenic aldehyde by ionic liquid-supported indenyl-molybdenum(II)-bipyridine complexes"

OC.F1.2: Norbert Krause, Dortmund University of Technology, Organic Chemistry, Dortmund, Germany

"Sustainable Gold Catalysis in Water Using Cyclodextrin- or PQS-tagged NHC-Gold(I) Complexes"

OC.F1.3: Antonio Monopoli, Università degli Studi di Bari Aldo Moro, Bari, Italy; b) CNR ICCOM- Sede di Bari, Bari, Italy "Direct synthesis of 3-aryl substituted isocoumarins through Palladium mediated C(sp2)-H Activation in Ionic Liquids"

OC.F1.4: Ádám Márk Pálvölgyi, Institute of Applied Synthetic Chemistry, TU Wien, Vienna, Austria

"Sterically demanding, flexible phosphoric acids for constructing multi-purpose asymmetric organocatalysts"

OC.F1.5: Christopher J. Whiteoak, Dpto. de Química Orgánica y Química Inorgánica, Edificio de Farmacia, Universidad de Alcalá, Madrid, Spain

"Development of Powerful Ga-based Catalysts for Cyclic Carbonate Synthesis and Application in the Synthesis of Value-added Bio-derived Compounds"

OC.F1.6:-Pascal Vermeeren, Theoretical Chemistry, Vrije Universiteit Amsterdam, The Netherlands

"How Lewis Acids Catalyze Diels-Alder Reactions"

OC.F1.7: Fabio Juliá, Department of Chemistry, University of Manchester, Manchester, UK

"Can simple amines mimic organotin?: Aminoalkyl radicals as halogen-atom transfer (XAT) agents for redox chemistry"

OC.F1.8: Maximilian Menche, BASF Quantum Chemistry, Ludwigshafen am Rhein, Germany; Catalysis Research Laboratory (CaRLa), Heidelberg, Germany

"Substrate-dependent Mechanistic Differences in Ni-catalyzed Carbonylations to Carboxylic Acids"

OC.F1.9: Cyprien Muller, Institut de Science et d'Ingénierie Supramoléculaires (ISIS), CNRS UMR 7006, Université de Strasbourg, France

"Synthesis of Densely Functionalized Isochromans through a Cascade Reaction Mediated by HFIP"

OC.F1.10: Giulio Bresciani, Università di Pisa, Dipartimento di Chimica e Chimica Industriale, Pisa, Italy

"New CO2 fixation Routes to Access Cyclic Carbamates and Carbonates Under Ambient Conditions"

OC.F1.11: Najoua Choukairi Afailal, Institut de Química Computacional i Catàlisi (IQCC) i Departament de Química, Universitat de Girona, Campus Montilivi, Girona, Catalunya, Espanya

"Dearomatizative Syn-Dihydroxylation of Arenes"

OC.F1.12: Eveline H. Tiekink, Vrije Universiteit Amsterdam, HV Amsterdam, The Netherlands

"How Lewis Acids Catalyze Ene Reactions"

OC.F1.13: Pol De La Cruz-Sánchez, Departament de Química Física i Inorgànica, Universitat Rovira i Virgili, Tarragona, Spain

"NEW GENERATION OF IMPROVED CATALYSTS FOR THE CONSTRUCTION OF CHIRAL C-C AND C-X BONDS. ENHANCING Pd-CATALYZED ASYMMETRIC ALLYLIC SUBSTITUTION REACTIONS"

OC.F1.14: Jaime Ponce de León, I. U. CINQUIMA/Química Inorgánica, Universidad de Valladolid, Valladolid, Spain

"Strategies for an increased selectivity in the catalytic synthesis of highly fluorinated biaryls"

OC.F1.15: Sergey Tin, Leibniz-Institut für Katalyse e.V., Rostock, Germany; Henkel AG & Co. KGaA, Düsseldorf, Germany

"Use of Iridium-Catalyzed Transfer Vinylation as an Efficient Synthetic Route towards Bio-Based (bis)-Vinyl Ethers"

OC.F1.16: Pauline Schiltz, Laboratoire de Chimie Moléculaire, CNRS UMR 9168, École Polytechnique, Institut Polytechnique de Paris, France

"Cobalt Complexes supported by Phosphinoquinoline Ligands for the Catalyzed Hydrosilylation of Carbonyl Compounds"

OC.F1.17: Lars Borchardt, Ruhr-University Bochum, Bochum, Germany

"Direct Mechanocatalysis – The Milling Ball is the Catalyst"

OC.F1.18: Laia Vicens, Institut de Química Computacional i Catàlisi (IQCC), Departament de Química, Universitat de Girona. Campus Montilivi, Girona, Catalonia, Spain

"Remote Amino Acid Recognition Enables Effective Hydrogen Peroxide at a Manganese Oxidation Catalyst"

OC.F1.19: Nikola Topolovčan, Ruđer Bošković Institute, Zagreb, Croatia

"Four faces of one compound: Transformations of isoindolinone-derived N(acyl) ketimines"

Subtheme F2 – Heterogeneous and Supported Catalysis

IL.F2.1: Jeremy Luterbacher, Institute of Chemical Sciences and Engineering, École Polytechnique Fédérale de Lausanne (EPFL), Switzerland

"Developing new bio-based chemicals by direct functionalization of biomass with acetals"

OC.F2.1: G. Grillo, Department of Drug Science and Technology, University of Turin, Italy

"Tailoring Furfural Reactivity On Au/Ceo2 Catalysts: Base-Free Oxidative Esterification Enhanced By Protecting Agent And Microwave Irradiation"

OC.F2.2: J. García-Martínez, Laboratorio de Nanotecnología, Molecular, Departamento de Química Inorgánica, Universidad de Alicante, Spain

"Zeolites Made out of Other Zeolites"

OC.F2.3: Linda Klag, Institute for Chemical Technology and Polymer Chemistry (ITCP), Karlsruhe Institute of Technology, Germany

"Spatially-resolved insights into activity and structure of mixed metal oxide catalysts during selective propylene and isobutene oxidation"

OC.F2.4: E. Pachatouridou, Chemical Process and Energy Resources Institute (CPERI), Centre for Research and Technology Hellas (CERTH), Thessaloniki, Greece

"Upgrading the Heavy Pyrolytic Oil from End-of-Life Tyres to High-Quality Carbon Black Feedstock via Hydrodesulphurization and Aromatization"

OC.F2.5: J. J. Garrido-González, Organic Chemistry Department, Faculty of Chemical Sciences, University of Salamanca, Spain

"Methanolysis of Non-activated Esters Catalysed by Novel Artificial Enzymes"

OC.F2.6: Aleix Comas-Vives, *Institute of Materials Chemistry, TU Wien, Vienna, Austria; Department of Chemistry, Universitat Autònoma de Barcelona, Catalonia, Spain*

"Rethinking the Active Site Concept in Computational Heterogeneous Catalysis"

OC.F2.7: Noemi Linares, Laboratorio de Nanotecnología Molecular, Dpto. Química Inorgánica, Universidad de Alicante, Spain

"Unleashing the Potential of Zeolites for the Transformation of Bulky Molecules"

OC.F2.8: Manfredi Caruso, Department of Chemistry, Materials, and Chemical Engineering "G. Natta", Politecnico di Milano, Italy

"N-Hydroxyphthalimide role in Aerobic Oxidations: Homogeneous versus Heterogeneous Catalysis"

OC.F2.9: Nataliia Marchenko, Laboratoire de Physique et Chimie des Nano-Objets INSA, Toulouse, France

"Selective hydrogenation and hydrodeoxygenation of aromatic ketones using bimetallic FexPt100-x nanoparticles immobilized on supported ionic liquid phases"

OC.F2.10: Anna M. Trzeciak, University of Wrocław, Faculty of Chemistry, Wrocław, Poland

"Hydrodechlorination of chlorobenzene derivatives catalyzed by Pd/GO in water. A new route to cyclohexanone"

OC.F2.11: Nawras Abidi, Univ Lyon, Ens de Lyon, CNRS UMR 5182, Université Claude Bernard Lyon 1, Laboratoire de Chimie, Lyon, France

"Is doping an efficient strategy to activate the basal plane of 2H-MoS2 for the hydrogen evolution reaction?"

OC.F2.12: Sebastian Weber, Institute of Catalysis Research and Technology, Karlsruhe Institute of Technology (KIT), Eggenstein-Leopoldshafen, Germany

"3D spatially-resolved catalyst characterization by X-ray tomography"

OC.F2.13: Sebastian Ponce, Universidad San Francisco de Quito, Ecuador

"Highly active magnesium-based catalyst for low-energy PET depolymerization"

OC.F2.14: Judit Oliver-Meseguer, Instituto de Tecnología Química (UPV-CSIC), Universitat Politècnica de València-Consejo Superior de Investigaciones Científicas, València, Spain

"Few atoms metal clusters with high catalytic and cytotoxic activity characterized by X-Ray Absorption Spectroscopy" OC.F2.15: Iván Sorribes, Instituto de Tecnología Química-Universitat Politècnica de València-Consejo Superior de Investigaciones Científicas, Valencia, Spain

"Innovative activation strategies of molybdenum sulfide-based catalysts for sustainable chemical transformations in fine chemistry"

OC.F2.16: Emilia Paone, Dipartimento DICEAM, Università degli Studi Mediterranea di Reggio Calabria, Reggio Calabria, Italy; Consorzio Interuniversitario per la Scienza e la Tecnologia dei Materiali (INSTM), Firenze, Italy

"Spent Lithium-Ion Batteries: from Waste to an Efficient Heterogeneous Catalyst for the Reductive Upgrading of Biomass-Derived Furfural"

OC.F2.17: Mihaela Florea, National Institute of Materials Physics, Magurele, Romania; University of Bucharest, Romania "Unprecedented chemoselective behaviour of MAX phase in functionalized nitroarene hydrogenation"

OC.F2.18: Marta Mon, Sustainable Organic Synthesis and Catalysis Group. Instituto de Tecnología Química. The Valencia Polythecnic University—Spanish Research Council (ITQ, UPV—CSIC).

"Sub-nanometric metal species in solution and supported in zeolites or MOFs for organic synthesis"

OC.F2.19: Margarida M. Antunes, CICECO-Aveiro Institute of Materials, Chemistry Department, University of Aveiro, Portugal

"Multifunctional catalysts for targeting different biobased products from furfural"

OC.F2.20: Rosa Adam, Instituto de Tecnología Química, Universitat Politècnica de València – Consejo Superior de Investigaciones Científicas (UPV – CSIC), València, Spain; Departamento de Química Orgánica, Facultad de Farmacia, Universidad de Valencia, Valencia, España

"Heterogeneous Pd-catalyzed efficient synthesis of imidazolones via dehydrogenative condensation between ureas and 1,2-diols"

Subtheme F3 – Bio and Biomimetic Catalysis

OC.F3.1: Inês A. S. Matias, Centro de Química Estrutural, Institute of Molecular Sciences, Instituto Superior Técnico, Universidade de Lisboa, Portugal

"Unprecedented CO2 fixation into polycarbonates catalysed by C-scorpionate complexes"

OC.F3.2: Luisa Maia, LAQV, REQUIMTE, NOVA School of Science and Technology | FCT NOVA, Caparica, Portugal

"Enzymatic CO2 reduction to formate: towards a biocatalyst for the use of the abundant atmospheric CO2"

OC.F3.3: Marie A. Perrin, Department of Chemistry and Applied Biosciences (D-CHAB), ETH Zürich, Switzerland "Bioinspired Polymetallic Sulfido Clusters for Nitrate Reduction"

Subtheme F4 – Photo and Electrocatalysis

IL.F4.1: Marcella Bonchio, University of Padova and ITM-CNR, Department of Chemical Sciences, Italy

"SUPRAMOLECULAR QUANTASOMES FOR ARTIFICIAL PHOTOSYNTHESIS"

IL.F4.2: Sami Lakhdar, CNRS/Université Paul Sabatier, Laboratoire Hétérochimie Fondamentale et Appliquée (LHFA, UMR5069), Toulouse, France

«Making and Breaking Chemical Bonds with Visible Light: Challenges and Opportunities"

II.F4.3: I.A.C. Pereira, NOVA University of Lisbon - ITQB NOVA - Instituto de Tecnologia Química e Biológica António Xavier, Portugal

"Metal-based biocatalysts for sustainable production of H2 and reduction of CO2"

OC.F4.1: Verónica Torregrosa-Rivero, Molecular Nanotechnology Lab, Department of Inorganic Chemistry, University of Alicante, Spain

"Hybrid L-Tyrosine-titania rutile nanorods and anatase nanoparticles with improved optical properties for photocatalytic applications"

OC.F4.2: Michael Schnürch, TU Wien, Institute of Applied Synthetic Chemistry, Vienna, Austria

"Photocatalytic deaminative benzylation and alkylation of tetrahydroisoguinolines with N-alkylpyrydinium salts"

OC.F4.3: Carola Tortora, Department of Chemistry and Technologies of Drugs, Faculty of Medicine and Pharmacy. "Sapienza" University of Rome, Italy

"PHOTORACEMIZATION-BASED VIEDMA RIPENING OF A BINOL DERIVATIVE"

OC.F4.4: Uwe Pischel, CIQSO - Centre for Research in Sustainable Chemistry, University of Huelva, Spain

"Organocatalysis using Ru(II) complexes with pyridine-derived ligands: Implications of photo- and metal-mediated mechanisms"

OC.F4.5: Laura F. Mazzei, CIC biomaGUNE, Donostia, Spain

"Design of Hybrid Structure for Bioorthogonal Drug Photoactivation and Photocatalysis"

OC.F4.6: Julie Broggi, Aix Marseille Univ, CNRS, Institut de Chimie Radicalaire (ICR), Faculté de Pharmacie, Marseille, France

"REDUCTIVE REACTIONS PHOTOCATALYZED BY SUPER ORGANIC ELECTRON DONORS"

OC.F4.7: Arianna Quintavalla, Department of Chemistry "G. Ciamician", University of Bologna, Bologna, Italy

"Expanding the Reactivity of Allenamides towards Sustainability"

OC.F4.8: Radek Cibulka, University of Chemistry and Technology, Prague, Czech Republic

"Towards Highly Chemoselective Catalytic Photooxidations"

OC.F4.9: Beatriz Royo, ITQB NOVA, Instituto de Tecnologia Química e Biológica António Xavier, Oeiras, Portugal

"Visible-Light Mediated Hydrosilylation of Carbonyls Using Mn(I) N-Heterocyclic Carbene Complexes"

OC.F4.10: Diego Mateo, King Abdullah University of Science and Technology (KAUST), KAUST Catalysis Center (KCC), Advanced Catalytic Materials, Thuwal, Saudi Arabia

"An efficient metal-organic framework-derived nickel catalyst for the light-driven methanation of CO2"

OC.F4.11: Luka Dorđević, Department of Chemistry, Northwestern University; Evanston, IL, USA; Center for Bio-Inspired Energy Science, Northwestern University; Chicago, IL, USA; Simpson Querrey Institute for BioNanotechnology, Northwestern University; Chicago, IL, USA

"Selective Catalytic Conversion of Acetylene to Ethylene Powered by Water and Visible Light"

OC.F4.12: Andrea Fermi, Dipartimento di Chimica "G. Ciamician", Università di Bologna, Italy

"Organic dyes in metallaphotoredox catalysis: strategies and perspectives for C-C bond formation enabled by visible light"

OC.F4.13: Pau Besalú-Sala, Institut de Química Computacional i Catàlisi and Departament de Química, Universitat de Girona, Spain

"Straightforward modelling of reactivity induced by electric fields"

OC.F4.14: Vincenzo Ruta, Politecnico di Milano, Milano, Italy

"Engineering Continuous-Flow Photochemical Microreactors Integrating Single-Atom Catalysts for Clean Water Applications"

Theme G: Spectroscopy and Perspectives in Analytical Chemistry / Advances in Physical Chemistry

Subtheme G1 – New Developments and Methods

IL.G1.1: Pavel Jelinek, Institute of Physics, Czech Academy of Sciences, Czech Republic

"High-resolution imaging of molecules by means of scanning probe microscopy"

IL.G1.2: Jiří Homola, Institute of Photonics and Electronics of the Czech Academy of Sciences, Prague, Czech Republic

"Optical biosensors based on surface plasmons: advances and applications"

IL.G1.3: Boris Mizaikoff, Institute of Analytical and Bioanalytical Chemistry, Ulm University, Germany and Hahn-Schickard, Institute for Microanalysis Systems, Ulm, Germany

"Quo Vadis, Mid-Infrared Spectroscopy? From Exhaled Breath Analysis to In-Vivo Biodiagnostics"

OC.G1.1: Cosima D. Calvano, Dipartimento di Chimica, Centro interdipartimentale SMART, Università degli Studi di Bari Aldo Moro, Bari, Italy

"Uncovering of spirulina marker peptides for allergen detection in processed foodstuffs by bottom-up approaches"

OC.G1.2: Marta Da Pian, Universitá degli Studi di Padova - DISC, Padova, Italy

"Combined use of forensic science in sexual assault: a case report"

OC.G1.3: Shane Grant, Nanoscale Biophotonics Laboratory, National University of Ireland Galway, University Road, Galway, Ireland

"Developing a Robust Elemental Screening Method for Cell Culture Media used in Biopharmaceutical Manufacturing based on Microwave Plasma Atomic Emission Spectroscopy"

OC.G1.4: Rudolf J. Schneider, BAM Federal Institute for Materials Research and Testing, Berlin, Germany

"Anthropogenic markers quantified by rapid immunochemical methods – what can their occurrence in wastewater, surface water, and drinking water tell us?"

OC.G1.5: O. C. Gonçalves, Centro de Química Estrutural, Institute of Molecular Sciences, Departamento de Química e Bioquímica, Faculdade de Ciências, Universidade de Lisboa, Portugal

"Development of Sorption-based Microextraction Techniques for Monitoring VOCs Released from the Four Main Portuguese Tree Species - Influence on wildfire propagation"

OC.G1.6: Tianyu Cen, Paul Scherrer Institute (PSI), Villigen-PSI, Switzerland; École Polytechnique Fédérale de Lausanne (EPFL), Lausanne, Switzerland

"Online Detection of Metal Containing Nanoparticles in Aerosol via a Single Particle ICP-MS based Technique"

OC.G1.7: Pedro F. Brandão, CESAM – Centre for Environmental and Marine Studies, Department of Chemistry, University of Aveiro, Portugal

"A new approach for water-soluble organic carbon extraction from atmospheric particulate matter under optimised analytical conditions"

OC.G1.8: Gulce Ogruc Ildiz, Department of Physics, Faculty of Sciences and Letters, Istanbul Kultur University, Turkey; CQC, Department of Chemistry, University of Coimbra, Portugal

"Multivariate Statistical Model Based on IR and Raman Spectroscopic Data of Blood Serum for Auxiliary Diagnosis of Mental Disorders"

OC.G1.9: Roberta D'Agata, Department of Chemical Sciences, University of Catania, Catania, Italy; INBB, Istituto Nazionale di Biostrutture e Biosistemi, Roma, Italy

"Plasmonic-based imaging sensor for ultrasensitive molecular diagnostics"

OC.G1.10: Dr. Christiane Kaus, *Institute for occupational safety and health of the German social accident insurance, Sankt Augustin, Germany*

"Quantitative monitoring of test gas atmospheres in real time and verification of a new dosing system for test gas generation by SIFT-MS"

OC.G1.11: Aura Tintaru, *Aix-Marseille Université, CNRS – Centre Interdisciplinaire de Nanoscience de Marseille UMR 7325, Marseille, France*

"Combined ion mobility-mass spectrometry/quantum chemistry approach for direct identification of enantiomers in a natural mixture"

Subtheme G2 – Light and Matter

IL.G2.1: Luca Prodi, Dipartimento di Chimica "Giacomo Ciamician" – Università di Bologna – Bologna – Italy; "Dye Doped Silica Nanoparticles as Photoactive Organized Systems for Nanomedicine"

Subtheme G3 – Electrochemistry

IL.G3.1: Christopher M.A. Brett, *Department of Chemistry, CEMMPRE, University of Coimbra, Portugal* "Tailoring electrochemical sensor materials for novel sensor platform architectures"

OC.G3.1: John F Cassidy, Applied Electrochemistry Group; School of Chemical and Pharmaceutical Sciences

"Formation of an Electroactive Coating Resulting From the Oxidation of Diclofenac on Screen Printed Carbon Electrodes"

OC.G3.2: Giovanni Valenti, Department of Chemistry "G. Ciamician", University of Bologna and INSTM, Bologna, Italy.

"New insights into the mechanism of coreactant electrogenerated chemiluminescence facilitating enhanced bioanalytical performance"

OC.G3.3: Marcus Fehse, CICenergiGUNE, Vitoria-Gasteiz, Spain

"Synchrotron radiation for investigating electrochemical energy storage systems"

OC.G3.4: Federico Bella, Department of Applied Science and Technology, Politecnico di Torino, Italy

"Chemical strategies to merge conversion, storage and integration of energy for a sustainable society"

Subtheme G4 – Surface Processes and Analysis

IL.G4.1: Bernhard Lendl, Univ. Prof. für Analytische Chemie, TU Wien

"Mid-IR Laser-Based Photothermal Spectroscopy: New Opportunities for Sensing and Imaging"

IL.G4.2: Barbara Kasprzyk-Hordern, Department of Chemistry, University of Bath, UK and Northern Ireland

"Mass Spectrometry in urban water profiling for environmental and public health assessment"

IL.G4.3: Tia E. Keyes, School of Chemical Sciences, National Centre for Sensor Research, Dublin City University, Ireland "Microcavity Supported Lipid Bilayers: Versatile Microfluidic Models for Biophysical Studies of Membrane Proteins and Lipids"

OC.G4.1: Valerio Loianno, Dept. of Chemical, Materials and Production Engineering, University of Naples, Federico II, Naples, Italy

"Combining FTIR spectroscopy and pressure-decay techniques to analyze sorption isotherms and sorption kinetics of pure gases and their mixtures in polymers"

OC.G4.2: O.S. Ablyasova a, Abteilung für Hochempfindliche Röntgenspektroskopie, Helmholtz-Zentrum Berlin für Materialien und Energie, Berlin, Germany; Physikalisches Institut, Universität Freiburg, Freiburg, Germany

"Disproportionation in gas-phase di-manganese oxide cluster revealed by X-ray absorption spectroscopy"

OC.G4.3: Mayara da S. Santos, Abteilung für Hochempfindliche Röntgenspektroskopie, Helmholtz-Zentrum Berlin für Materialien und Energie, Berlin, Germany; Physikalisches Institut, Universität Freiburg, Freiburg, Germany

"Identification of reactive metal-oxygen species via X-ray absorption spectroscopy"

IR"

OC.G4.4: Maria Ricciardi, Department of Medicine and Surgery, University of Salerno, Baronissi, SA, Italy

"An innovative analytical method based on Stable Isotope Ratios of Carbon, Sulfur and Oxygen to identify sources of pollutants in black crust samples"

OC.G4.5: A. Catarina V. D. dos Santos, Institute of Chemical Technologies and Analytics, TU Wien, Vienna, Austria "Nanoscale Chemical Characterization and Imaging of a Recycled Post-Consumer Waste Polyolefin Blend using AFM-

Subtheme G5 – Applied Physical Chemistry

IL.G5.1: Luis M. N. B. F. Santos, CIQUP-IMS Institute of Molecular Sciences, Departamento de Química e Bioquímica, Faculdade de Ciências da Universidade do Porto, Portugal

"NANOSTRUCTURATION, THE KEY FOR THE UNDERSTANDING OF IONIC FLUIDS PROPERTIES"

IL.G5.2: M.F. Montemor, Centro de Química Estrutural, Institute of Molecular Sciences, Departamento de Engenharia Química, Instituto Superior Técnico, Universidade de Lisboa, Portugal

"Fit for the purpose supercapacitors: A new path to enable electrochemical energy storage"

OC.G5.1: Daniela Rodrigues Silva, Vrije Universiteit Amsterdam, Department of Theoretical Chemistry, Amsterdam Institute for Molecular and Life Sciences, Amsterdam Center for Multiscale Modeling, HV, Amsterdam, The Netherlands "Nature and Strength of Lewis Acid—Base Pairs"

OC.G5.2: Cristian Pezzato, Institut des Sciences et Ingénierie Chimiques, École Polytechnique Fédérale de Lausanne, Lausanne, Switzerland

"Light-switchable buffers"

OC.G5.3: Luís P. Viegas, Coimbra Chemistry Center-Institute of Molecular Sciences (CQC-IMS), Department of Chemistry, University of Coimbra, Portugal

"Transition State Theory at the service of Green Chemistry"

OC.G5.4: David Robinson, Department of Chemistry and Forensics, School of Science and Technology, Nottingham Trent University, Nottingham, United Kingdom

"Multiscale Simulations of a Phase Sensitive Probe of Lipid Membrane Structure"

OC.G5.5: Lucas de Azevedo Santos, Vrije Universiteit Amsterdam, Department of Theoretical Chemistry, Amsterdam Institute for Molecular and Life Sciences, Amsterdam Center for Multiscale Modeling, HV, Amsterdam, The Netherlands "Intermolecular covalent interactions"

OC.G5.6: Gonçalo V. S. M. Carrera, NOVA, School of Science and Technology, LAQV-REQUIMTE, Caparica, Portugal "Phase Behavior Profile of a Generical Three-Compound Mixture: A Chemoinformatic Approach"

OC.G5.7: Vito Gallo, Politecnico di Bari, via Orabona 4 – CAMPUS, I-70125, Bari, Italy; Innovative Solutions S.r.l., Noci (BA), Italy

"Community-built analytical systems: from calibration lines to non-targeted analysis by using NMR spectroscopy"

OC.G5.8: Brian Sachini, CLAN-Center for Light Activated Nanostructures, Istituto ISOF-CNR, Bologna, Italy; Dipartimento di Chimica Industriale "Toso Montanari", Università di Bologna, Bologna, Italy

"Improving Light-Driven Molecular Pumps: Dissecting Thermodynamic and Kinetic Entaglement in a Photoswitchable Molecular Axle"

Subtheme G6 – Photochemistry and Photophysics

IL.G6.1: Fernando Martín, IMDEA Nanoscience and Universidad Autónoma de Madrid, Spain

"Attochemistry: imaging and controlling electron dynamics in molecules with attosecond light pulses"

IL.G6.2: Alan G. Ryder, School of Chemistry, National University of Ireland, Galway, Ireland

"The application of multi-dimensional fluorescence spectroscopy, anisotropy, and chemometrics as a process-wide, analytical technology platform for Biopharmaceuticals"

OC.G6.1: Luís F.B. Fontes, LAQV-REQUIMTE, Department of Chemistry, University of Aveiro, Portugal; CICECO – Aveiro Institute of Materials, Department of Chemistry, University of Aveiro, Portugal

"In situ illumination NMR: photoisomerization of naphtopyran derivatives"

OC.G6.2: R. Fausto, CQC-IMS, Department of Chemistry, University of Coimbra, Portugal

"IR-induced and tunneling reactions in cryogenic matrices: the (incomplete) story of a successful endeavor"

OC.G6.3: Paula Araújo, Laboratório Associado para a Química Verde – REQUIMTE, Departamento de Química e Bioquímica, Faculdade de Ciências, Universidade do Porto, Portugal

"Multistate of chemical reactions of 4'-dimethyl-7-diethylaminoflavylium. Thermodynamics, kinetics and Photochemistry modulated by water: ethanol, SDS and CTAB micelles"

OC.G6.4: Ivana Nikšić-Franjić, Ruđer Bošković Institute, Zagreb, Croatia

"Impact of positive charge and ring-size on interactions of calixarenes with DNA, RNA and nucleotides"

OC.G6.5: El Mountassir El Mouchtari, Aix Marseille Univ, CNRS, LCE, Marseille, France

"Highly sensitive fluorescence sensors based on rhodamine for detection of Cd (II) and Hg (II) in aqueous media"

OC.G6.6: Cecilia Bruschi, Institute of Organic Chemistry, Karlsruhe Institute of Technology, Karlsruhe, Germany

"New heteroleptic copper(I) complexes: towards more sustainable photosensitizers"

OC.G6.7: Marc Montilla, Institute of Computational Chemistry and Catalysis, Chemistry Department, University of Girona, Spain

"Origin-Independent Energy-Based decomposition of the first and second hyperpolarizabilities"

Transversal theme 1: Imaging

IL.Imag.1: Sara Bals, Department of Physics, University of Antwerp, Belgium

"3D Structure of Nanomaterials under Realistic Conditions"

IL.Imag.2: Susana Rocha, Molecular Imaging and Photonics, KU Leuven, Leuven, Belgium

"Imaging the forces driving cellular behaviour: from material characterisation to 3D cell models"

OC.Imag.1: Roberta Tabone, Karlsruhe Institute of Technology (KIT), Germany

"Intriguing Zn (II) emitters in the "biological window" with large Pseudo-Stokes shift for bioimaging"

OC.Imag.2: Morgane Baudoin, Univ. Grenoble Alpes, CNRS, DPM, Grenoble, France

"High-resolution two-color imaging of peptidoglycan and teichoic acids in S.pneumoniae by dSTORM"

OC.Imag.3: E. Rühl, Physical Chemistry, Freie Universität Berlin, Germany

"Hyperspectral Imaging of Drug Penetration Processes in Human Skin"

Transversal theme 2: Energy, Environment and Sustainability

IL.EES.1: Juan Morante, University of Barcelona, Spain

"CO2 electroreduction to valuable products with high productivities"

IL.EES.2: Elena Selli, Dipartimento di Chimica, Unviversità degli Studi di Milano. Milano, Italy

"Ternary Metal Oxide-based Photoanodes for Solar Energy Conversion"

OC.EES.1: Luis C. Branco, LAQV-REQUIMTE, Faculdade de Ciências e Tecnologia, Universidade Nova de Lisboa, Caparica, Portugal

"Sustainable Ionic and Porous Systems for CO2 Conversion to Fuels"

OC.EES.2:-**Elena Serrano**, Laboratorio de Nanotecnología Molecular, Departamento de Química Inorgánica, Universidad de Alicante, Spain.

"Functional Photoactive Materials with Tuneable Crystalline Structure and Morphology for Photocatalytic and Solar cell applications"

OC.EES.3: Mark C Gray, WestCHEM, School of Chemistry, The University of Glasgow, UK

"Catalysis in confined spaces: monitoring catalytic activity by modulating the catalytic environment"

Transversal theme 3: Molecules in Motion

IL.MM.1: Alberto Credi, CLAN-Center for Light Activated Nanostructures, Università di Bologna, Italy

"Playing with Molecular Rings and Strings: New Directions for Nanoscale Machines and Motors"

IL.MM.2: Nicolas Giuseppone, University of Strasbourg, Institut Charles Sadron - CNRS, Strasbourg, France

"Artificial molecular machines that work on all scales"

OC.MM.1: Miguel A. Ramos-Docampo, Interdisciplinary Nanoscience Center (iNANO), Aarhus University, Denmark "Stimuli-responsive polymers to induce locomotion in nanomotors"

OC.MM.2: Chiara Taticchi, CLAN-Center for Light Activated Nanostructures, Istituto ISOF-CNR, Bologna and Dipartimento di Chimica Industriale "Toso Montanari", Università di Bologna, Italy;

"Towards an Autonomous Photochemically Driven Rotary Motor Based on a Catenane"

OC.MM.3: Qi Zhang, Stratingh Institute for Chemistry, University of Groningen, The Netherlands

"The road to intrinsically dynamic materials: disulfide chemistry as a solution"

Section I - Functional Materials

Subtheme OTS1.1 – Carbon-based Materials

IL.OTS1.1: Diego Peña, Centro Singular de Investigación en Química Biolóxica en Materiais Moleculares (CiQUS), Departamento de Química Orgánica, Universidade de Santiago de Compostela, Spain

"Building nanographenes by combining organic synthesis and surface science"

OC.OTS1.1.1: Victor Blanco, Departamento de Química Orgánica, Facultad de Ciencias, Universidad de Granada, Spain

"Macrocycle Receptors Incorporating Heptagon-containing Hexa-peri-haxebenzororonene Analogues"

OC.OTS1.1.2: Cecilia Wetzl, CIC BiomaGUNE, Parque Tecnológico de San Sebastián, San Sebastián, Guipúzcoa, Spain

"Graphene field effect transistors for neurotransmitter monitoring"

OC.OTS1.1.3: A.J. Stasyuk, Institut de Química Computacional and Departament de Química, Universitat de Girona, Girona, Catalonia, Spain; Faculty of Chemistry, University of Warsaw, Poland

"Molecular bowls as electron donors in photoinduced electron transfer reactions"

OC.OTS1.1.4: G. Minervini, Polytechnic of Bari, and University of Bari "Aldo Moro", Italy

"Synthesis of Carbon Dots with Green Photostable Emission in Open Reactor: Study of Fluorescence Origin and Mechanisms"

OC.OTS1.1.5: Sven Grätz, Ruhr-Universität Bochum, Germany

"What Maketh a Pore? The Formation of Porosity in the Solid-State"

Subtheme OTS1.2 – Organic Electronics

IL.OTS1.2: Kasper Moth-Poulsen, Chalmers University of Technology, Sweden

"Molecular Solar Thermal Energy Systems"

OC.OTS1.2.1: Ľubomír Švorc, Institute of Analytical Chemistry, Faculty of Chemical and Food Technology, Slovak University of Technology in Bratislava, Slovakia

"Modern electrochemical sensors in drug and food analysis"

OC.OTS1.2.2: Michal Valášek, Institute of Nanotechnology, Karlsruhe Institute of Technology (KIT), Karlsruhe, Germany "Tripodal Chromophores for Luminescence Studies on Gold: Towards Organic Optoelectronic Devices"

OC.OTS1.2.3: Mathias O. Senge, School of Chemistry, Trinity Biomedical Sciences Institute, Trinity College Dublin, The University of Dublin, Ireland

"Cubane and Bicyclo(1.1.1)pentane - Rigid Hydrocarbon Linkers for Flexible Uses"

OC.OTS1.2.4:-Marco Carlotti, Center for Materials Interfaces, Istituto Italiano di Tecnologia, Pontedera, Italy

"Multi-Potent Precursor Approach for the In-Situ Generation of Conjugated Polymers with Complementary Electronic Properties"

OC.OTS1.2.5: Luca M. Cavinato, Chair of Biogenic Functional Materials, Technical University of Munich, Germany

"Multivariate tool identifying [Cu(N^N)(P^P)]+ design and device architecture enables first-class blue and white light-emitting electrochemical cells"

OC.OTS1.2.6: Manuel Souto, Department of Chemistry, CICECO – Aveiro Institute of Materials, University of Aveiro, Aveiro, Portugal

"Redox-active organic building blocks for the chemical design of electroactive porous frameworks"

Subtheme OTS1.3 - Polymers and devices

II.OTS1.3: David Écija, Institute for Advanced Studies in Nanoscience (IMDEA Nanoscience), Madrid, Spain "On-surface synthesis of pi-conjugated polymers"

OC.OTS1.3.1: Matthias Schneider, University of Potsdam, Institute of Chemistry, Potsdam, Germany

"3D printed PLA scaffolds as versatile Platform for Multipurpose Applications in Chemistry, Biology, and Physics"

OC.OTS1.3.2: Alessandro Pedrini, Department of Chemistry, Life Sciences and Environmental Sustainability, University of Parma, Italy

"Cavitand-based hierarchical porous organic polymers for gas adsorption/separation and water treatment"

OC.OTS1.3.3: Rocío Domínguez, Instituto de Nanociencia, Nanotecnología y Materiales Moleculares (INAMOL), Universidad de Castilla-La Mancha, Toledo, Spain

"Cyclopentadithiophenevinylene oligomers: a new versatile conjugated material"

OC.OTS1.3.4: Jeremy E. Wulff, University of Victoria, Victoria, BC, Canada

"Universal Crosslinkers for On-Demand Upgrading of Polymer Properties"

OC.OTS1.3.5: Ana Charas, Instituto de Telecomunicações, Instituto Superior Técnico, Universidade de Lisboa, Portugal

"Improving the electrical conductivity and structural properties of poly(3,4-ethylenedioxythiophene):polystyrenesulfonate (PEDOT:PSS) for thin film and flexible electronics"

OC.OTS1.3.6: Xuelian LIU, Normandie Univ, INSA Rouen, UNIROUEN, CNRS, PBS, 76000 Rouen, France

"A mechanical robust and thermal resistant polyvinyl resin crosslinked by quadruple hydrogen bonding with self-healing and shape memory properties"

Other parallel sections: Chemistry and Society

Subtheme OTS2.2 – New Tools for Learning

IL.OTS2.2.1: Ron Blonder, Department of Science Teaching, Weizmann Institute of Science, Israel

"Chemistry Teachers' Personalized Professional Development Framework"

IL.OTS2.2.2: Silvija Markic, Ludwig-Maximilians-University Munich, Germany

"Importance of learning of scientistic language at the university level"

OC.OTS2.2.1: Tânia Coelho, FCT NOVA, Campus de Caparica, Monte de Caparica, Portugal

"The teacher's professional knowledge and the interdisciplinarity in a context of technology integration"

OC.OTS2.2.2: Amy S. Cannon, Beyond Benign, Wilmington, MA, USA

"Green chemistry in higher education: An upstream approach to addressing sustainable development goals"

Subtheme OTS2.3 – Chemistry and Heritage: preserving and sharing

IL.OTS2.3.1: Brigitte Van Tiggelen, Science History Institute, The Netherlands

"EuChemS Historical Landmarks: chemists, their past and the sharing of chemical heritage"

IL.OTS2.3.2: **Isabel Malaquias,** University of Aveiro, Research Centre on Didactics and Technology in the Education of Trainers, Physics Department, Portugal

"Didactic physics and chemistry instruments from Portuguese high schools - trash for the bin or a heritage to preserve?"

OC.OTS2.3.1: Marta C. Lourenço, University of Lisbon, National Museum of Natural History and Science, Portugal

"Time capsules of innovation: The historical spaces of chemistry in Portugal"

OC.OTS2.3.2: **Natércia Teixeira,** *LAQV-REQUIMTE, Department of Chemistry and Biochemistry, Faculty of Sciences, Universidade do Porto, Portugal*

"Unveiling the iron-polyphenol complexes behind medieval iron gall inks through a multi-analytical methodology"

Subtheme OTS2.4 – Origin of Life

IL.OTS2.4: Olivier Trapp, Department of Chemistry, Ludwig Maximilian University Munich, Germany "Initial Steps towards an Evolutionary System leading to the Emergence of Life"

Subtheme OTS2.6 – Equity and Responsibility

OC.OTS2.4.1: Guillermo Restrepo, Max Planck Institute for Mathematics in the Sciences, Leipzig, Germany

"The chemical space and some ethical consequences of its uneven growth"

OC.OTS2.4.2: Jan Mehlich, Center for Life Ethics, Rheinische Wilhelmsuniversität Bonn, Germany

"Teaching Responsible Chemistry: A Challenge-Based Learning Framework for the Implementation of RRI Courses in Chemistry Education"

OC.OTS2.4.3: Rachel Mamlok-Naaman, Weizmann Institute of Science, Israel

"Women in chemistry - in Scientific Careers (SciCar) Horizon Project"