

# Poster Programme

## Poster Session 1

Monday 14<sup>th</sup> May 2018 - 12:55-14:00

Room - Wintergarten

- [P1.01] **Application of *Typha domingensis* Pers. in artificial floating for sewage treatment**  
T. Benvenuti<sup>1,2</sup>, F. Hamerski<sup>2</sup>, A. Giacobbo<sup>2</sup>, A.M. Bernardes<sup>\*2</sup>, M.A.S. Rodrigues<sup>1</sup>, <sup>1</sup>Feevale University, Brazil, <sup>2</sup>UFRGS, Brazil
- [P1.02] **Isolation and characterization of chlorophylls and xanthophylls in grass by high-speed countercurrent chromatography**  
M.E. Castro-Benítez<sup>1</sup>, <sup>1</sup>Technische Universität Braunschweig, Germany, <sup>2</sup>Amazonic Institute of Scientific Research SINCHI, Colombia
- [P1.03] **Deoxydehydration of polyols using rhenium based catalysts**  
M. Lupacchini, A. Mascitti, L. Tonucci, N. d'Alessandro\*, G. d'Annunzio University of Chieti-Pescara, Italy
- [P1.04] **Specialty oils in Flanders and The Netherlands: Promising opportunities for renewable chemicals**  
M. Bartels, H. Sels, J. Geuens\*, Karel de Grote University College, Belgium
- [P1.05] **Hydrogenation of aqueous sugar solutions from renewable resources: Selection of a suitable reactor concept**  
C. Kirstein<sup>\*1</sup>, C. Glotzbach<sup>2</sup>, T. Turek<sup>1</sup>, <sup>1</sup>Clausthal University of Technology, Germany, <sup>2</sup>Thyssenkrupp Industrial Solutions AG, Germany
- [P1.06] **Bio-based aromatic building blocks for vitamin E manufacture**  
U.L. Létinois\*, T.N. Netscher, W.B. Bonrath, DSM Nutritional Products, Switzerland
- [P1.07] **Bio-derived UV blocking materials from analogues of natural phenols by laccase-catalysed oxidative oligomerization**  
J. Lim\*, B. Sana, R. Krishnan, J. Seayad, F.J. Ghadessy, S. Jana, B. Ramalingam, A\*Star, Singapore
- [P1.08] **Salting-out-assisted-liquid-liquid-extraction of ectoine from a halophilic bacterium**  
G. Luque Consuegra\*, I. Moore Fisher Gilpin, S. Kutschke, K. Pollmann, Helmholtz-Zentrum-Dresden-Rossendorf, Germany
- [P1.09] **Physical and chemical pretreatment to increase the saccharification of waste paper by *Trichoderma viride* cellulose for bio-product development**  
K.M.P. Mokatse\*, J.P.H. Van Wyk, Sefako Makgatho Health Sciences University, South Africa
- [P1.10] **Ionic liquid improves yield and antioxidant activity of carotenoids extracts from orange peel**  
D.C. Murador<sup>\*1</sup>, A.R.C. Braga<sup>1</sup>, P.L.G. Martins<sup>2</sup>, V.V. De Rosso<sup>1</sup>, <sup>1</sup>Universidade Federal de São Paulo, Brazil, <sup>2</sup>Federal Institute of São Paulo, Brazil
- [P1.11] **Condensation of furanic platform molecules to diesel precursors over sulfonic acid functionalized silica supports**  
M. N.Gebresillase\*, J.G. Seo, Myongji University, Republic of Korea
- [P1.12] **Highly fluorescent and photostable hybrid nanofibers as scaffolds for bioimaging**  
S. Raja<sup>\*1</sup>, R.T. Paschoalin<sup>1</sup>, L.H.C. Mattoso<sup>1</sup>, M. Zenke<sup>2</sup>, A. Sechi<sup>2</sup>, <sup>1</sup>Embrapa Instrumentação, Brazil, <sup>2</sup>Uniklinik Aachen, Germany
- [P1.13] **Valorization of *Citrus unshiu* (Mandarine orange) peel as a resource of natural antioxidant and reductant in textile dyeing**  
Y. Shin\*, D.I. Yoo, Chonnam National University, Republic of Korea
- [P1.14] **Electron-beam crosslinking of lignin - modified polymer coatings**  
J. Lössner<sup>1</sup>, C. Mauss<sup>2</sup>, U. Spohn<sup>\*1</sup>, <sup>1</sup>Fraunhofer Institut für Mikrostruktur von Werkstoffen und Systemen, Germany, <sup>2</sup>Herotron E-beam Service GmbH, Germany
- [P1.15] **Lignin - modified and conductive adhesive layers based on epoxide resins**  
M. Cao, M. Rühl, M. Zeitner, A. Krombholz, U. Spohn\*, Fraunhofer Institut für Mikrostruktur von Werkstoffen und Systemen, Germany

- [P1.16] **Lignin - modified electrodes based on bio-based epoxide coatings**  
U. Spohn<sup>1</sup>, C. Morig<sup>1</sup>, M. Rühl<sup>1</sup>, M. Cao<sup>1</sup>, L. Geringswald<sup>1</sup>, K. Rauch<sup>1</sup>, <sup>1</sup>Fraunhofer Institut für Mikrostruktur von Werkstoffen und Systemen Halle, Germany, <sup>2</sup>Sema Gesellschaft für Innovationen mbH Coswig, Germany
- [P1.17] **Polymers from 3-carene: Biobased high-performance polyamides with varying crystallinity**  
P. Stockmann\*, H. Strittmatter, V. Sieber, *Bio, Electro and Chemocatalysis BioCat, Germany*
- [P1.18] **Surface functionalization of chitin and chitosan by direct reaction of fluorene and thiophene**  
R. Sugimoto\*, A. Phung, *Kochi University of Technology, Japan*
- [P1.19] **Method optimization of microalgae-bacteria consortia in microbiology nutrient broth media**  
H.O. Tighiri\*, E.A. Erkurt, *Cyprus International University, Turkey*
- [P1.20] **Upgrading of glycerol towards allyl alcohol under continuous-flow conditions**  
N.N. Tshibalonza\*, J-C. Monbaliu, *University of Liège, Belgium*
- [P1.21] **Rubisco from green biomass: Production, characterisation and storage for further purification for industrial applications**  
M.A. Usta-Bony\*, S. Mathé, A. Fernandez, *Institut National de Sciences Appliquées, France*
- [P1.22] **Selective catalytic oxidation of biogenic raw materials to organic acids**  
D. Voss, M. Mozer, J. Albert\*, *FAU Erlangen-Nürnberg, Germany*
- [P1.23] **Cobalt-containing polyoxometalate salts for water oxidation in acidic media**  
J.T. Arens\*, M. Blasco-Ahicart, J.R. Galan-Mascaros, *Institute of Chemical Research of Catalonia, Spain*
- [P1.24] **Comparison of electrocatalytic nitrate reduction using 2.5%Pd/ $\gamma$ -Al<sub>2</sub>O<sub>3</sub> pellets and 2.5%Pd/carbon fibers**  
T.F. Beltrame<sup>1</sup>, F.M. Zoppas<sup>1,2</sup>, L. Marder<sup>1</sup>, F.A. Marchesini<sup>2</sup>, E. Miró<sup>2</sup>, A.M. Bernardes<sup>1</sup>, <sup>1</sup>UFRGS, Brazil, <sup>2</sup>UNL, Argentina
- [P1.25] **Solventless oxidation of olefins by Mo@biochar**  
A.P. Carvalho<sup>1</sup>, C. Petite<sup>1</sup>, M. Silva<sup>1</sup>, M.J. Ferreira<sup>1,2</sup>, A.S. Mestre<sup>1</sup>, P.D. Vaz<sup>1</sup>, C.D. Nunes<sup>1</sup>, <sup>1</sup>Universidade de Lisboa, Portugal, <sup>2</sup>Universidade de Lisboa, Puerto Rico
- [P1.26] **Fabrication of PtPd nanowires by the electrospinning method for the application in polymer electrolyte fuel cells**  
C.Y. Lee, M.H. Chang\*, *Tatung University, Taiwan*
- [P1.27] **Glycidol as green feedstock in the synthesis of value-added products**  
R. Cucciniello<sup>1</sup>, M. Ricciardi<sup>1</sup>, D. Cespi<sup>3</sup>, F. Passarini<sup>2</sup>, C. Capacchione<sup>1</sup>, J. Barrault<sup>4</sup>, A. Proto<sup>1</sup>, <sup>1</sup>University of Salerno, Italy, <sup>2</sup>University of Bologna, Italy, <sup>3</sup>EMC Innovation Lab s.r.l., Italy, <sup>4</sup>Valagro Recherche, France
- [P1.28] **Alkyl carbonates as non-toxic reagents for selective gas-phase alkylation of phenolics**  
J. De Maron<sup>1</sup>, T. Tabanelli<sup>1</sup>, L. Ganzerla<sup>1</sup>, C. Lucarelli<sup>2</sup>, F. Cavani<sup>1</sup>, <sup>1</sup>University of Bologna, Italy, <sup>2</sup>University of Insubria, Italy
- [P1.29] **Catalysts derived from sustainable natural and value added alkaloids from poppies**  
E. Silm<sup>1</sup>, P. Pata<sup>1</sup>, J.C. Kruis<sup>1</sup>, A. Sikerina<sup>1</sup>, I. Pata<sup>2</sup>, T. Kanger<sup>1</sup>, N. Gathergood<sup>1</sup>, <sup>1</sup>Tallinn University of Technology, Estonia, <sup>2</sup>IVEX Lab, Estonia
- [P1.30] **The quantitatively changes in affinity and reactivity determined for Rubisco from a predictable, three-dimensional, real time kinetic model**  
Y. Guo<sup>1</sup>, Z.H. Yuan<sup>1</sup>, S.J. Liu<sup>2</sup>, <sup>1</sup>Chinese Academy of Sciences, China, <sup>2</sup>State University of New York, USA
- [P1.31] **Integrated study on lipase-catalysed production of non-phthalate plasticiser in a solvent-free system**  
H. Hosney<sup>1,2</sup>, A. Mustafa<sup>1</sup>, K. Abd-Allah<sup>3</sup>, I. Ashour<sup>1,2</sup>, <sup>1</sup>Minia University, Egypt, <sup>2</sup>Zewail City for Science and Technology, Egypt, <sup>3</sup>Sohag University, Egypt
- [P1.32] **Preparation of bifunctional polymer-supported catalysts with anisotropic structure**  
K-K. Kang\*, J-O. Nam, C-S. Lee, *Chungnam National University, Republic of Korea*
- [P1.33] **A greener catalysis to the removal of N<sub>2</sub>O: Its selective reduction by H<sub>2</sub> at very low temperatures**  
M.H. Kim\*, K.H. Yang, T.P.T. Nguyen, *Daegu University, Republic of Korea*
- [P1.34] **Nanocrystalline TiO<sub>2</sub> doped by small amount of pre-synthesized colloidal CdS quantum dots for photocatalytic degradation of toxic aromatic compounds**  
N.S. Kozhevnikova\*, A.S. Vorokh, T.I. Gorbunova, M.G. Pervova, I.V. Baklanova, L.Y. Buldakova, M.Y. Yanchenko, E.V. Shalaeva, A.N. Enyashin, *Russian Academy of Sciences, Russia*
- [P1.35] **Palladium nanoparticles or homogeneous Pd catalysts in C-C coupling reactions?: DFT based insights about how we can control it**  
V. Martinez-Merino<sup>1,2</sup>, A. Cornejo<sup>1</sup>, <sup>1</sup>Public University of Navarre, Spain, <sup>2</sup>UNED, Spain

- [P1.36] **Development of tailor-made heterogeneous catalysts for the deoxydehydration (DODH) of fermentation based 2,3-butanediol**  
I. Meiners\*, R. Palkovits, *RWTH University, Germany*
- [P1.37] **Organotin(IV) compound with high catalytic activity in the glycerolysis of triacylglycerides**  
M.R. Meneghetti\*, S.M.P. Meneghetti, M.A. da Silva, A.S.S. dos Santos, *Federal University of Alagoas, Brazil*
- [P1.38] **Chitosan-decorated copper nanoparticles for one-pot synthesis of quinoline derivatives: Green sustainable perspective**  
K.S. Alghamdi<sup>1</sup>, N.S.I. Ahmed<sup>1,2</sup>, D. Bakhotmah<sup>1</sup>, M. Mokhtar\*<sup>1,2</sup>, <sup>1</sup>King Abdulaziz University, Saudi Arabia, <sup>2</sup>National Research Centre, Egypt
- [P1.39] **Clay-supported copper catalyst for Huisgen cycloaddition**  
A. Nait Ajjou\*, R. Richard, M. Touaibia, *Université de Moncton, Canada*
- [P1.40] **Cinchona alkaloids in selected stereoselective reactions**  
S.F. Oguz\*, B. Bas, Y. Camlısoy, S. Alsancak, *Yeditepe University, Turkey*
- [P1.41] **Optimization and intensification of hydrosilylation reaction using microreactor system**  
A. Pawlowska-Zygarowicz\*<sup>1,2</sup>, R. Kukawka<sup>1,2</sup>, H. Maciejewski<sup>1,2</sup>, M. Smiglak<sup>1,2</sup>, <sup>1</sup>Adam Mickiewicz University Foundation, Poland, <sup>2</sup>Adam Mickiewicz University, Poland
- [P1.42] **A sustainable and economical strategy to prepare zeolite-MOF composite catalyst for biomass conversion and condensation reactions**  
P. Rani\*, R. Srivastava, *Indian Institute of Technology Ropar, India*
- [P1.43] **Aerobic oxidation of  $\alpha$ -pinene catalyzed by homogeneous and MOF-based Mn catalysts**  
Y.S. Raupp\*<sup>1</sup>, C. Yildiz<sup>2</sup>, W. Kleist<sup>2</sup>, M.A.R. Meier<sup>1</sup>, <sup>1</sup>Karlsruhe Institute of Technology (KIT), Germany, <sup>2</sup>Ruhr-University Bochum, Germany
- [P1.44] **Biocatalytic hydrogenation: Combining highly selective biocatalysis with atom efficient chemical methods**  
H.A. Reeve\*, L.A. Thompson, J.S. Rowbotham, K.A. Vincent, *University of Oxford, UK*
- [P1.45] **Dihydroxyacetone production via heterogeneous biotransformations of crude glycerol**  
M. Ripoll\*, E. Jackson, L. Betancor, *Universidad ORT Uruguay, Uruguay*
- [P1.46] **Hydrogenolysis of glycerol acetals and ketals over bifunctional catalysts**  
V.O. Samoilov\*, M.I. Onishchenko, A.L. Maximov, A.V. Topchiev *Institute of Petrochemical Synthesis RAS, Russia*
- [P1.47] **Synthesis and sustainable catalytic applications of zeolite-based multi-functional catalysts**  
B. Samah\*, R. Srivastava, *Indian Institute of Technology Ropar, India*
- [P1.48] **New concept of bio-method for the development of eco-friendly indigo reduction**  
Y. Shin\*, K. Son, D.I. Yoo, *Chonnam National University, Republic of Korea*
- [P1.49] **Study of novel catalyst RuNi for direct synthesis of Hydrogen Peroxide(H<sub>2</sub>O<sub>2</sub>) with DFT calculations**  
M. Sun\*, X. Liu, B. Huang, *The Hong Kong Polytechnic University, Hong Kong*
- [P1.50] **Selective conversion of glycerol into methyl lactate catalysed by functionalised CNT supported Au-Pd alloy nanoparticles and solid Lewis acid**  
Z. Tang\*, H. Heeres, P. Pescarmona, *University of Groningen, The Netherlands*
- [P1.51] **Kinetics study on hydrocracking of alfa-cellulose using Ni, Co, Pd supported on mordenite catalysts**  
W. Trisunaryanti\*, T. Triyono, R. Armunanto, L.P. Hastuti, D.D. Ristiana, R.V. Ginting, *Universitas Gadjah Mada, Indonesia*
- [P1.52] **Sustainability assessment in early phases of process design: Choosing suitable LCSA approaches within the field of homogenous catalysis**  
J. Wunderlich\*, R. Schomäcker, *Technische Universität Berlin, Germany*
- [P1.53] **Efficient Pt-catalyzed allylation of indoles with allylic acetates in water**  
B.-J. Peng, S.-C. Yang\*, *Kaohsiung Medical University, Taiwan*
- [P1.54] **Smart-5: An assessment tool for sustainable development in chemicals application**  
C.T.F. Blum\*<sup>1</sup>, V. Abraham<sup>1,2</sup>, D. Bunke<sup>1,3</sup>, R. Joas<sup>1,2</sup>, <sup>1</sup>German Environment Agency, Germany, <sup>2</sup>BIPRO GmbH, Germany, <sup>3</sup>Oeko-Institut, Germany
- [P1.55] **Vinylplus, circular avant la lettre: How the European PVC sector developed a system for closing the loop on PVC and voluntarily phased out hazardous substances**  
R. Blume\*<sup>1,2</sup>, E. van Hamelen<sup>2</sup>, E. Janssen<sup>2</sup>, <sup>1</sup>The Natural Step International, Sweden, <sup>2</sup>The Natural Step Germany, Germany
- [P1.56] **Multifunctional role of magnetic nanoparticles in efficient micro-algae separation and catalytic hydrothermal liquefaction**  
D. Egesa\*, P. Plucinski, *University of Bath, UK*

- [P1.57] **Study on selecting criteria of hazardous chemicals for sustainable business on textile raw material companies**  
J. Kim<sup>\*1,2</sup>, O. Weiß<sup>1</sup>, H. Jeon<sup>1</sup>, E. Choe<sup>3</sup>, S. Kim<sup>1,2</sup>, <sup>1</sup>*Korea Institute of Science and Technology-Europe, Germany*, <sup>2</sup>*University of Science and Technology, Republic of Korea*, <sup>3</sup>*Korea Institute of Industrial Technology, Republic of Korea*
- [P1.58] **Workers' exposure to chemical hazards: A case study in selected shoe manufactures in Bogor Districts, Indonesia**  
E. Laelasari\*, D. Kristanti, B. Rahmat, *The Indonesian Agency for Health Research and Development, Indonesia*
- [P1.59] **Green chemistry for teaching and learning natural science**  
P.J. González García<sup>\*1,2</sup>, A. Ortega Moreno<sup>2</sup>, C. Pérez-Méndez<sup>2</sup>, S. Figueroa-Duarte<sup>2</sup>, <sup>1</sup>*Universitat Autònoma de Barcelona, Spain*, <sup>2</sup>*Universidad de Chile, Chile*
- [P1.60] **Need of green chemistry for K-12 students of Indian schools**  
S.K. Sharma, *JECRC University, India*
- [P1.61] **A sustainable and expedient (soft) approach to mechanochemical processing of Portland cement**  
A.T. Almalkawi\*, P. Soroushian, S. Hamadna, *Michigan State University, USA*
- [P1.62] **Chemical composition, antioxidant and antifungal activity of *Cymbopogon citratus*, *Laurus nobilis* and *Santolina chamaecyparissus* extracts**  
M. Aourach\*, M. Elboukari, H. Essalmani, *Abdelmalek Essaadi University, Morocco*
- [P1.63] **Evaluation of Fluidized Bed Bioreactor Process for Mmabatho waste water treatment Plant**  
S. Azizi\*, W.A.J. Nel, *University of South Africa, South Africa*
- [P1.64] **Application of pomegranate peels as adaptable adsorbents for water purification: A chemometric approach**  
F.G. Barah<sup>\*1</sup>, M.S. Elazazy<sup>1</sup>, R. Kalla<sup>1</sup>, A. Abdelatty<sup>1</sup>, M. Al-Sulaiti<sup>1</sup>, B. Shomar<sup>2</sup>, K. Al-Saad<sup>1</sup>, <sup>1</sup>*Qatar University, Qatar*, <sup>2</sup>*Hamad Bin Khalifa University, Qatar*
- [P1.65] **Green synthesis and characterization of Ag-nanoparticles by using grape stalk waste extract**  
J. Bastos Arrieta<sup>\*1,2</sup>, M. Martínez<sup>1,2</sup>, J.J. Roa<sup>1,2</sup>, A. Florido<sup>1,2</sup>, <sup>1</sup>*Universitat Politècnica de Catalunya, Spain*, <sup>2</sup>*Barcelona Research Center for Multiscale Science and Engineering, Spain*
- [P1.66] **Developing sustainable activated carbons for improved pharmaceutical compounds removal from urban wastewaters in the framework of LIFE IMPETUS project**  
A.P. Carvalho<sup>\*1</sup>, A.S. Mestre<sup>1</sup>, M.A. Andrade<sup>1</sup>, R.M.C. Viegas<sup>2</sup>, E. Mesquita<sup>2</sup>, M.J. Rosa<sup>2</sup>, <sup>1</sup>*Universidade de Lisboa, Portugal*, <sup>2</sup>*National Civil Engineering Laboratory (LNEC), Portugal*
- [P1.67] **A binder-free and sustainable composite electrode based on kraft lignin**  
S. Chaleawler-Umporn<sup>\*1,2</sup>, C. Liedel<sup>1</sup>, <sup>1</sup>*Max Planck Institute of Colloids and Interfaces, Germany*, <sup>2</sup>*National Nanotechnology Center, Thailand*
- [P1.68] **Green preparation of porous PVDF-MWCNT foam with super-wettability for oil cleaning from water surface**  
F.Z. Chen\*, J.Y. Liu, X. Liu, *Dalian University of Technology, China*
- [P1.69] **Oxygen reduction reaction active sites on titanium oxynitride catalyst formed without increasing the nitrogen-doping level**  
M. Chisaka, *Hirosaki University, Japan*
- [P1.70] **Pharmaceuticals compounds (PCs) in urban wastewater (WW) from developing countries: Environmental concentrations and toxicity**  
E. Clervil<sup>\*1,2</sup>, E. Emmanuel<sup>1</sup>, Y. Perrodin<sup>3</sup>, <sup>1</sup>*Université Quisqueya, Haiti*, <sup>2</sup>*Science et Technologie, Haiti*, <sup>3</sup>*Université de Lyon, France*
- [P1.71] **Biodegradation studies of a series of dipeptide based ionic liquids and their transformation products**  
G. Raba<sup>1</sup>, I. Kapitanov<sup>1</sup>, Y. Karpichev<sup>1</sup>, V. Gupta<sup>1</sup>, S. Sudheer<sup>1</sup>, K. Kummerer<sup>2</sup>, R. Vilu<sup>1</sup>, N. Gathergood<sup>\*1</sup>, <sup>1</sup>*Tallinn University of Technology, Estonia*, <sup>2</sup>*Leuphana University, Germany*
- [P1.72] **Development of activated carbon fibers for phenol removal from produced water**  
T. Ibrahim\*, D. Alkathiri, Y. Elsayed, *American University of Sharjah, United Arab Emirates*
- [P1.73] **Carbon consumption of activated carbon in the thermal regeneration progress for SO<sub>2</sub> and NO removal from flue gas**  
Y. Li\*, B. Wang, Y. Lin, S. Ding, T. Zhu, *Chinese Academy of Sciences, China*
- [P1.74] **The dye waste solution deal with cyclonic plasma at atmospheric pressure**  
C.H. Li\*, C. Huang, *Yuan Ze University, Taiwan*

- [P1.75] **Pharmaceuticals removal by nanoporous carbons from sisal residues: Towards a circular economy**  
A.S. Mestre<sup>1,2</sup>, F. Hesse<sup>1</sup>, C. Freire<sup>2</sup>, C.O. Ania<sup>3</sup>, A.P. Carvalho<sup>1</sup>, <sup>1</sup>Universidade de Lisboa, Portugal, <sup>2</sup>Universidade do Porto, Portugal, <sup>3</sup>University of Orléans, Portugal
- [P1.76] **Implications of chemical composition of different types of greywater in seed germination and growth of crop plants**  
N. Norman<sup>1</sup>, M. Mthokozisi<sup>1</sup>, <sup>1</sup>University of Kwazulu Natal, South Africa, <sup>2</sup>Water Research Commission, South Africa
- [P1.77] **Prediction of post-mining drainage quality in coalfields of the Main Karoo Basin and selected Sub-basins: South Africa**  
L. Ncube\*, B. Zhao, K. Liu, H.J. van Niekerk, *University of South Africa, South Africa*
- [P1.78] **Assessing the impacts of historical coal mining activities on water quality in the Elitheni Colliery, Eastern Cape Province, South Africa**  
L. Ncube\*, B. Zhao, H.J. van Niekerk, *University of South Africa, South Africa*
- [P1.79] **Tailoring permanganate particles with manganese oxide for slow release of permanganate and the degradation of dimethyl trisulfide (DMTS), an algae odorant**  
A.I. Omoike\*, D.M. Harmon, *University of South Carolina Upstate, USA*
- [P1.80] **Analytical methods for fast characterization of heavy metals and their leaching behavior in incineration ash- Singapore**  
E.S. Ong, S. Patra\*, S.T. Whaung, *Singapore University of Technology and Design, Singapore*
- [P1.81] **Preparation of selective catalytic reduction (SCR) Catalysts CeO<sub>2</sub>-TiO<sub>2</sub>/FA and their property investigations**  
X.F. Ren\*, C.X. Hai, X. Li, Y. Shen, J.B. Zeng, Y. Zhou, *Chinese Academy of Sciences, China*
- [P1.82] **Evaluation of electrochemical oxidation in reverse osmosis concentrate of sewage**  
E.K. Schoenell, L.R.H. Santos, C.L. Boufleuher, C.L.D. Barba, M.A.S. Rodrigues\*, *Feevale University, Brazil*
- [P1.83] **The possibilities of the use of ultrasound, its combination with ionizing radiation aiming to eliminate microbiota**  
D.V. Shushpanova\*, S.E. Mazina<sup>1,2</sup>, M.D. Kharlamova<sup>1</sup>, <sup>1</sup>Peoples' Friendship University of Russia, Russia, <sup>2</sup>Moscow State University, Russia
- [P1.84] **Inducers of systemic resistance in plants**  
M. Smiglak<sup>1,2</sup>, P. Czerwoniec<sup>2</sup>, R. Kukawka<sup>1,2</sup>, P. Lewandowski<sup>1,2</sup>, H. Pospieszny<sup>3</sup>, <sup>1</sup>Adam Mickiewicz University Foundation, Poland, <sup>2</sup>Adam Mickiewicz University, Poland, <sup>3</sup>National Research Institute, Poland
- [P1.85] **Study of total chromium desorption using tartaric acid in the soil around tannery industry**  
S. Suherman\*, F.A.R. Putri, N.H. Aprilita, M. Mudasar, *Universitas Gadjah Mada, Indonesia*
- [P1.86] **The potential of using hydrophobic ionic liquids for the extraction of chlorophenols from wastewater**  
R. Sulaiman\*, I.M. Nashef, S. Hasan, *Khalifa University of Science and Technology, United Arab Emirates*
- [P1.87] **Reduction and degradation of methylene blue dye wastewater by argon plasma jet at atmospheric pressure**  
Y.C. Sung\*, C. Huang, *Yuan Ze University, Taiwan*
- [P1.88] **Control of ethylene emissions by adsorption onto transition metal-modified natural zeolites: Optimisation of zeolite properties by response surface methodology**  
A.C. Ulloa, H. Valdés\*, M.S. Cepeda, *Universidad Católica De La Santísima Concepción, Chile*
- [P1.89] **Effect of storage environmental conditions during ethylene removal by adsorption onto natural and metal oxide modified Chilean zeolites**  
N.J. Abreu<sup>1,2</sup>, H. Valdés<sup>1</sup>, C.A. Zaror<sup>2</sup>, F. Azzolina-Jury<sup>3</sup>, M.F. Melendres<sup>2</sup>, <sup>1</sup>Universidad Católica de la Santísima Concepción, Chile, <sup>2</sup>Universidad de Concepción, Chile, <sup>3</sup>Normandie Université, France
- [P1.90] **Analysis of Melaleuca cajuputi extract as potential bio-herbicides for paddy weeds**  
B.W.B. Kueh, S. Yusup\*, N. Osman, N.H. Ramli, *Universiti Teknologi PETRONAS, Malaysia*
- [P1.91] **Efficient capturer of warm CO<sub>2</sub> based on magnesia**  
Y.Y. Li, J.L. Chen, X.Y.M. Dong, Y. Wang, J.H. Zhu\*, *Nanjing University, China*
- [P1.92] **Synthesis and characterization of thermally curable guaiacol based poly (benzoxazine-urethane) coating for corrosion protection on mild steel**  
G.A. Phalak\*, D.M. Patil, S.T. Mhaske, *Institute Of Chemical Technology, Mumbai, India*
- [P1.93] **Auxins: A potential modulator for cell growth and lipid accumulation in *Chlorella emersonii* and *Scenedesmus opoliensis***

J. Singh\*, N. Chakravarty, D. Jain, R.P. Singh, *IIT Roorkee, India*

- [P1.95] **Biochars: A sustainable solution to waste minimization and environmental remediation**  
A. Sarswat\*, D. Mohan, *Jawaharlal Nehru University, India*
- [P1.95] **Catalytic reduction of 4-nitrophenol and azo dyes by biogenic platinum nanoparticles synthesized using *Dillenia indica* bark extract**  
A.S. Mohanty\*<sup>1,2</sup>, B.S. Jena<sup>1,2</sup>, <sup>1</sup>CSIR-Institute of Minerals and Materials Technology, India, <sup>2</sup>Academy of Scientific and Innovative Research, India

**Poster Session 2**  
**Tuesday 15<sup>th</sup> May 2018 - 13:00-14:00**  
**Room - Wintergarten**

- [P2.01] **Microwave-assisted synthesis of adamantyl triazole compounds having substituted boron moiety as new DNA intercalating compounds**  
D. AL-Duhaidahawi\*<sup>1</sup>, D. Saleem<sup>2</sup>, <sup>1</sup>Kufa University, Iraq, <sup>2</sup>AL-Mustansyria, Iraq
- [P2.02] **Synthesis, characterization of novel eco-friendly coumarin derivatives with potential cytotoxic activity**  
N. Alomari\*<sup>1</sup>, A. Othman<sup>1</sup>, M. Khalaf<sup>1</sup>, D. Pietrella<sup>1</sup>, <sup>1</sup>Al-Kitab University College, Iraq, <sup>2</sup>College of Science, Iraq, <sup>3</sup>University of Duhok, Iraq, <sup>4</sup>University of Perugia, Italy
- [P2.03] **Comparison preparation method of gold nanoparticles cassava between using biosynthesis high energy and biosynthesis**  
T.S. Aprilia\*, B.H. Nugroho, H.J. Suparmi, *Universitas Islam Indonesia, Indonesia*
- [P2.04] **Plant-mediated green synthesis of silver and magnetic nanoparticles**  
S. Ezzat<sup>1</sup>, D. El Gazzar\*<sup>1</sup>, S. Abdel Gaber<sup>1</sup>, M. El Shazly<sup>1,2</sup>, M. Abdel Kader<sup>1</sup>, A. Thabet<sup>1,2</sup>, <sup>1</sup>German University in Cairo, Egypt, <sup>2</sup>Ain Shams University, Egypt
- [P2.05] **Preparation and characterization of gold nanoparticles bawang tiwai bulb (*Eleutherine palmifolia* L.) extracts with an environmentally friendly biosynthetic process**  
B. Hernawan Nugroho, S. Suparmi, M. Farid Aditya\*, A. Triana, *Universitas Islam Indonesia, Indonesia*
- [P2.06] **Preparation and characterization of gold nanoparticles Lamtoro extract (*Leucaena leucocephala* (Lam.) De Wit) with eco-friendly biosynthesis process**  
B.H. Nugroho\*, S. Suparmi, M.R. Syifaudin, *Universitas Islam Indonesia, Indonesia*
- [P2.07] **Antiviral activity of carrageenan from the red seaweed *Solieria filiformis* extracted by microwave-assisted extraction (MAE)**  
A.C. Peñuela\*<sup>1</sup>, N. Bourgougnon<sup>2</sup>, G. Bedoux<sup>2</sup>, D. Robledo<sup>1</sup>, Y. Freile-Pelegri<sup>1</sup>, <sup>1</sup>CINVESTAV-Mérida, Mexico, <sup>2</sup>Université de Bretagne Sud, France
- [P2.08] **Effect of 8 $\alpha$ -Tigloyloxyhirsutanolide 13-O-acetate isolated from *Vernonia cinerea* on human liver microsomal cytochrome P450 enzymes and on A549 cell growth**  
P. Pouyfung\*, P. Rongnoparut, *Mahidol University, Thailand*
- [P2.09] **Green synthesis of gold nanoparticle using aqueous extract of ant nest (*Myrmecodia armata* DC) with an eco-friendly method**  
Y.K. Priandanu\*, S. Suparmi, I.P. Syawaliani, T. Paramitha, B.H. Nugroho, *Islamic University of Indonesia, Indonesia*
- [P2.10] **Harmonized rules for conducting life cycle assessments of pharmaceuticals and their manufacturing processes to facilitate greener pharmacy**  
M.W. Siegert\*, Y. Emara, A. Lehmann, M. Finkbeiner, *Technische Universität Berlin, Germany*
- [P2.11] **Green methyl formate production from CO<sub>2</sub> by phosphine-based polymer-bound Ru catalyst**  
R. Sun\*, A. Kann, P. Hausoul, R. Palkovits, *RWTH Aachen, Germany*
- [P2.12] **Preparation and characterization of gold nanoparticles leaf extract of matoa (*Pometia pinnata*) with an environmentally friendly biosynthetic process**  
B. Hernawan, S. Suparmi, A. Triana\*, M. Farid, I. Widyanani, *Universitas Islam Indonesia, Indonesia*
- [P2.13] **Complete separation and recovery of HMF from mixture of fructose dehydration with hollow porous organic framework adsorbent**  
Y.B. Zhang<sup>1</sup>, Q.X. Luo\*<sup>1</sup>, M.H. Lu<sup>3,4</sup>, Z.T. Liu<sup>1,2</sup>, <sup>1</sup>Shaanxi Normal University, China, <sup>2</sup>Shaanxi University of Science & Technology, China, <sup>3</sup>Shenyang University of Chemical Technology, China, <sup>4</sup>Dalian Institute of Chemical Physics, China
- [P2.14] **First2run: Flagship demonstration of an integrated biorefinery for dry crops sustainable exploitation towards biobased materials production**

- A. Vassoi<sup>1</sup>, F. Digioia<sup>2</sup>, F. Cavani<sup>1</sup>, <sup>1</sup>University of Bologna, Italy, <sup>2</sup>Novamont S.p.a., Italy
- [P2.15] **Diterminal oxidation of medium-chain alkanes**  
Y.M. van Nuland, G. Eggink, R.A. Weusthuis\*, Wageningen University & Research, The Netherlands
- [P2.16] **Design of experiment of geopolymer from metakaolin blended with fly ash**  
P. Aengchuan\*, A. Poowancum, V. Siriphongphanh, Suranaree University of Technology, Thailand
- [P2.17] **Facile preparation of nanofibrillar networks of chitin aerogel containing ureido functional groups**  
K. Ganesan\*, M. Heyer, L. Ratke, B. Milow, German Aerospace Center, Germany
- [P2.18] **Antibacterial activity of L-phenylalanine derived ionic liquids**  
D.K. Arum<sup>1</sup>, M. Sihtmäe<sup>2</sup>, I. Kapitanov<sup>1</sup>, Y. Karpichev<sup>1</sup>, A. Kahru<sup>2</sup>, N. Gathergood<sup>\*1</sup>, <sup>1</sup>Tallinn University of Technology, Tallinn, Estonia, <sup>2</sup>National Institute of Chemical Physics and Biophysics, Tallinn, Estonia
- [P2.19] **Eco-efficiency of process and material choices in development of electrochemical energy storage materials**  
E. Glogic<sup>\*1,2</sup>, A. Adan-Mas<sup>2</sup>, G. Sonnemann<sup>2</sup>, S. Young<sup>1</sup>, <sup>1</sup>University of Waterloo, Canada, <sup>2</sup>University of Bordeaux, France
- [P2.20] **Hydrothermal dehydration of d-glucose and d-xylose in deionized water**  
M. Kammoun\*, T. Istasse, N. Rassâa, T. Bettaieb, A. Richel, ULG -Gembloux Agro Bitech-, Belgium
- [P2.21] **Synthesis and antibacterial properties of essential oils compounds grafted onto lignocellulosic fibers**  
Z. Khaldi<sup>\*1</sup>, T-S. Ouk<sup>1</sup>, R. Zerrouki<sup>1,2</sup>, <sup>1</sup>Université de Limoges, France, <sup>2</sup>Université du Québec À Trois-Rivières, Canada
- [P2.22] **Different catalyst influence on tall oil fatty acid epoxidation**  
M. Kirpluks\*, E. Vanags, A. Abolins, U. Cabulis, Latvian State Institute of Wood Chemistry, Latvia
- [P2.23] **Microwave assisted green synthesis of Acrylamide Cyclodextrin-grafted silylated bentonite for the controlled delivery of tetracycline hydrochloride**  
D. Manohar Mullassery\*, B. Noeline Fernandez, R. Surya, T. Diana, Fatima Mata National College, India
- [P2.24] **β-Farnesene-based tackifiers**  
K.A. Nelson\*, N.P. Hansen, Total Cray Valley, USA
- [P2.25] **Bio-based pyrrolidones from carboxylic acids**  
K. Schute\*, Y. Louven, R. Palkovits, RWTH Aachen, Germany
- [P2.26] **Polymerizable nitrogen-based ionic liquids: Synthesis, physicochemical characterization and potential of use in nano-scale polymeric elements formation**  
A. Zajac<sup>1</sup>, A. Szpecht<sup>1</sup>, O. Stolarska<sup>\*1</sup>, K. Komorowska<sup>3,4</sup>, K. Rola<sup>3</sup>, M. Smiglak<sup>1,2</sup>, <sup>1</sup>Adam Mickiewicz University Foundation, Poland, <sup>2</sup>Adam Mickiewicz University, Poland, <sup>3</sup>Wroclaw Research Centre EIT+, Poland, <sup>4</sup>Wroclaw University of Science and Technology, Poland
- [P2.27] **Study of carbon dots modification for Escherichia coli detection: Colistin sulfate and ammonium citrate concentration variation**  
S. Suherman<sup>\*1</sup>, N.A. Haryanto<sup>1</sup>, E.T. Wahyuni<sup>1</sup>, M. Ilmi<sup>1</sup>, K. Morita<sup>2</sup>, Y. Oki<sup>3</sup>, <sup>1</sup>Universitas Gadjah Mada, Indonesia, <sup>2</sup>Ushio Inc., Japan, <sup>3</sup>Kyushu University, Japan
- [P2.28] **Sorption properties of magnetic composites of bentonite**  
G. Kurmangazhy, S.M. Tazhibayeva\*, Z. Lakhbayeva, D. Artykova, K.B. Musabekov, Al-Farabi Kazakh National University, Kazakhstan
- [P2.29] **Preparation of biodegradable packages based on agar, gelatin and starch**  
S.M. Tazhibayeva\*, A.D. Yermagambetova, B.B. Tyussyupova, K.B. Musabekov, Al-Farabi Kazakh National University, Kazakhstan
- [P2.30] **Toxicity assessment of biobased ionic liquid crystals in rats**  
A.A.C. Toledo Hijo\*, H.D.F.Q. Barros, G.J. Maximo, C.B.B. Cazarin, M.R. Maróstica Junior, A.J.A. Meirelles, University of Campinas, Brazil
- [P2.31] **Shades of green - the versatility and sustainability of imidazolium ionic liquids**  
S. Tröger-Müller\*, J. Brandt, M. Antonietti, C. Liedel, Max Planck Institute of Colloids and Interfaces, Germany
- [P2.32] **The electrochemical functionalization of para-aminophenol in the presence of anhydride acetic by differential pulse voltammetry method**  
S.Z. Samiei-Kashi, S. Amanzadeh-Salout\*, Islamic Azad University, Iran

- [P2.33] **Optimization of the extraction of saponin from spent tea leaves and *Furcraea selloa* var. *marginata* using supercritical-CO<sub>2</sub> and microwave**  
N.H. Ramli@Yusof<sup>1</sup>, S. Yusup<sup>1</sup>, K. Johari<sup>1</sup>, B.K. Bin<sup>\*1</sup>, A.T. Quitain<sup>2</sup>, <sup>1</sup>Universiti Teknologi PETRONAS, Malaysia, <sup>2</sup>Kumamoto University, Japan
- [P2.34] **Catalytic synthesis of nicotinic and isonicotinic acids**  
R. Kurmazyzy<sup>1</sup>, A.M. Imangazy<sup>\*2</sup>, T.P. Mikhailovskaya<sup>1</sup>, P.B. Vorobyev<sup>1</sup>, <sup>1</sup>Bekturov Institute of Chemical Sciences, Kazakhstan, <sup>2</sup>Satbayev University, Kazakhstan
- [P2.35] **New organic biodegradable products - green developments from microalgae**  
Z.N. Kainarbayeva<sup>\*1</sup>, A.M. Kartay<sup>2</sup>, M.B. Umerzakova<sup>1</sup>, B.K. Donenov<sup>1</sup>, <sup>1</sup>Institute of Chemical Sciences, Kazakhstan, <sup>2</sup>Kazakh-British Technical University, Kazakhstan
- [P2.36] **A greener approach for the synthesis of selenium modified oligonucleotides**  
C. Liczner<sup>\*</sup>, C. Wilds, Concordia University, Canada
- [P2.37] **Utilizing decarboxylative and desulfonative cross-couplings for conjugated polymer**  
J. Liu<sup>\*1</sup>, P. Forgione<sup>1,2</sup>, <sup>1</sup>Concordia University, Canada, <sup>2</sup>Centre in Green Chemistry and Catalysis, Canada
- [P2.38] **Sustainable synthesis of biobased recyclable thermosets**  
P.S. Löser<sup>\*1</sup>, M.A.R. Meier<sup>1</sup>, A. Llevot<sup>2</sup>, <sup>1</sup>Karlsruhe Institute of Technology, Germany, <sup>2</sup>Université de Bordeaux, France
- [P2.39] **Palladium-catalyzed decarboxylative and desulfonative cross-coupling for the modular synthesis of unsymmetric oligothiophenes**  
C. Messina<sup>\*1</sup>, P. Forgione<sup>1,2</sup>, <sup>1</sup>Concordia University, Canada, <sup>2</sup>Centre in Green Chemistry and Catalysis, Canada
- [P2.40] **Synthesis of ligands based on ionic liquids**  
O. Stolarska<sup>\*1</sup>, S. Rutecka<sup>1</sup>, A. Szpecht<sup>1</sup>, A. Zajac<sup>2</sup>, M. Smiglak<sup>1,2</sup>, H. Maciejewski<sup>1,2</sup>, <sup>1</sup>Adam Mickiewicz University, Poland, <sup>2</sup>Adam Mickiewicz University Foundation, Poland
- [P2.41] **Thermodynamic properties estimation and consistency of solid's solubility data in supercritical fluids**  
L. Nasri, University Constantine 3, Algeria
- [P2.42] **The activity of  $\beta$ -galactosidase in solutions containing ionic liquids based on the choline cation**  
A. Pawlowska-Zygarowicz<sup>\*1,2</sup>, J. Strakowska<sup>2</sup>, J. Hoppe<sup>1</sup>, M. Smiglak<sup>1,2</sup>, <sup>1</sup>Adam Mickiewicz University, Poland, <sup>2</sup>Adam Mickiewicz University Foundation, Poland
- [P2.43] **Lightweight Expanded Clay Aggregates (LECA) produced by using Iraqi Western desert materials**  
S.F.A. Sharif, Knowledge University / Erbil, Iraq
- [P2.44] **Photolytic degradation of organosilicon compounds: Comparison of the effect of different co-solvents**  
E. Grabitz<sup>1</sup>, O. Olsson<sup>1</sup>, N.W. Mitzel<sup>2</sup>, K. Kümmerer<sup>\*1</sup>, <sup>1</sup>Leuphana University Lueneburg, Germany, <sup>2</sup>University Bielefeld, Germany
- [P2.45] **TiO<sub>2</sub> Coated Fe<sub>3</sub>O<sub>4</sub>/SiO<sub>2</sub> nanoparticles as a magnetically separable photocatalyst for reduction of Au(III) in the mixture of Au(III) and Cu(II) ions**  
E.S. Kunarti<sup>\*</sup>, A. Syoufian, I. Kartini, I.L. Kartika, A. Agnes, Universitas Gadjah Mada, Indonesia
- [P2.46] **Cd<sub>1-x</sub>Zn<sub>x</sub>S/halloysite nanostructures and their photocatalytic properties**  
A. Stavitskaya<sup>\*1</sup>, D. Logvinenko<sup>1</sup>, F. Pouresmail<sup>1</sup>, E. Kozlova<sup>2</sup>, D. Kozlov<sup>2</sup>, Y. Lvov<sup>3</sup>, V. Vinokurov<sup>1</sup>, <sup>1</sup>Gubkin Russian State University, Russia, <sup>2</sup>Boreskov Institute of Catalysis SB RAS, Russia, <sup>3</sup>Louisiana Tech University, USA
- [P2.47] **Templated assembly of photoswitch Azobenzene (4-(4-nitrophenylazoyl)-phenol) by functionalization of multi-walled carbon nanotube for solar energy storage applications**  
A. Ehsani Telgerafchi<sup>\*</sup>, M. Mehranpour, Islamic Azad University, Iran
- [P2.48] **Novel concept of solid oxide electrolysis cells for high efficient hydrogen production**  
G. Kim, UNIST, Republic of Korea
- [P2.49] **Plasmon-activated water utilized in clean energies**  
H.C. Chen, C.P. Yang, H.Y. Tsai, Y.C. Liu<sup>\*</sup>, Taipei Medical University, Taiwan
- [P2.50] **Energy-storage resource of plasmon-activated water solution from solar energy**  
F.D. Mai<sup>\*</sup>, C.P. Yang, H.Y. Tsai, Y.C. Liu, Taipei Medical University, Taiwan
- [P2.51] **Design of PID controller & Lead-Lag compensator for the wind turbines: A comparison in robust performance**  
A. Nouriani, H. Moradi<sup>\*</sup>, G. Vossoughi, Sharif University of Technology, Iran
- [P2.52] **Wind turbine control in order to achieve the maximum power**  
F. Golnary, H. Moradi<sup>\*</sup>, G. Vossoughi, Sharif University of Technology, Iran



- [P2.53] **Fine tuning the performance of photoelectrochemical hydrogen generation from water via ancillary ligand modification of ruthenium photosensitizers**  
I. Purnama\*, Y. Kubo, J.Y. Mulyana, *Tokyo Metropolitan University, Japan*
- [P2.54] **Rational growth and dispersion of molybdenum-based electrocatalysts (Mo<sub>2</sub>C, MoP) on carbon nanotubes for highly efficient hydrogen evolution reaction**  
M. Qamar\*<sup>1</sup>, A. Adam<sup>1</sup>, M.H. Suliman<sup>1</sup>, B. Merzougui<sup>2</sup>, M.N. Siddiqui<sup>1</sup>, Z.H. Yamani<sup>1</sup>, <sup>1</sup>King Fahd University of Petroleum and Minerals, Saudi Arabia, <sup>2</sup>Hamad Bin Khalifa University, Saudi Arabia
- [P2.55] **CO<sub>2</sub> hydrogenation to methanol under dynamical conditions**  
H. Ruland\*, K. Kähler, R. Schlögl, *Max Planck Institute for Chemical Energy Conversion, Germany*
- [P2.56] **Development of a novel phase transformation solid state proton buffer and a dynamic inorganic carbon buffer hydrogen evolution cell using an acid doped IL based non aqueous electrolyte and NiHcd HER electrode under varying current densities**  
J.S. Sethi, *St.Columba's School, India*
- [P2.57] **Study of physical-chemical properties for 2nd generation ethanol-blended diesel fuel in India**  
G.N. Singh\*, R.S. Bharj, *Dr B R Ambedkar National Institute of Technology, India*
- [P2.58] **OER catalysts performance evaluation via an electrochemical flow cell/ICP-OES setup**  
I. Spanos\*, A.K. Mechler, R. Schlögl, *Max Planck Institute for Chemical Energy Conversion, Germany*
- [P2.59] **Highly active Sb<sub>2</sub>Se<sub>3</sub> photocathodes with earth abundant MoS<sub>x</sub> hydrogen evolution catalyst**  
R.R. Prabhakar, S.D. Tilley\*, *University of Zurich, Switzerland*
- [P2.60] **MoS<sub>2</sub> nanoflake decorated graphene oxide for efferent charge transfer**  
H.Y. Zhu<sup>1,2</sup>, C.C. Wang<sup>2</sup>, J. Zhou<sup>2</sup>, Y.C. Wang<sup>2</sup>, Y. Wang\*<sup>2</sup>, Z.G. Zou<sup>2</sup>, M. Terrones<sup>1</sup>, <sup>1</sup>The Pennsylvania State University, USA, <sup>2</sup>Nanjing University, China
- [P2.61] **Synthesis of Leaf-like LiFePO<sub>4</sub> /C cathode composites by hydrothermal method**  
Y. Zhou\*, C. Hai, Q. Yun, X. Ren, X. Li, Y. Shen, J. Zeng, *Chinese Academy of Science, China*
- [P2.62] **Recovery of carotenoids from brown crab shell residues using natural deep eutectic solvents**  
L. Rodrigues\*<sup>1,2</sup>, J.M. Silva<sup>3</sup>, A.R.C. Duarte<sup>2</sup>, A. Paiva<sup>2</sup>, A.A. Matias<sup>1</sup>, <sup>1</sup>Instituto de Biologia Experimental e Tecnológica, Portugal, <sup>2</sup>Universidade Nova de Lisboa, Portugal, <sup>3</sup>Universidade do Minho, Portugal
- [P2.63] **Series Chinese drugs of six-position therapy of traditional Chinese medicine, intelligent effective and convenient, open up new ways of research, promising development prospects**  
X. Yang, *Beijing Longwen School, China*
- [P2.64] **Microwave-assisted recycling of polyethylene into dicarboxylic acids**  
E. Bäckström\*, K. Odelius, M. Hakkarainen, *KTH Royal Institute of Technology, Sweden*
- [P2.65] **Valorisation of industrial waste water sludge by extraction of ALE (alginate-like polysaccharides)**  
M. Bartels\*, J. Geuens, *Karel de Grote University College, Belgium*
- [P2.66] **Parameters evaluation on rare earth elements leaching efficiency**  
A.M. Bernardes\*, D.D. München, H.M. Veit, *UFRGS, Brazil*
- [P2.67] **Reduction of leachate in domestic waste**  
Z. Boroomand, *Camerino, Italy*
- [P2.68] **Wastes for new composite materials: Comparative LCA of new polypropylene and chicken feathers composite with conventional petrochemical materials**  
M.D. Álvarez-del-Castillo<sup>1,2</sup>, N. Garrido\*<sup>1</sup>, G. Molins<sup>1</sup>, M. Casadesús<sup>1,2</sup>, J. Macanás<sup>1</sup>, F. Carrillo<sup>1,2</sup>, <sup>1</sup>Universitat Politècnica de Catalunya, Spain, <sup>2</sup>INTEXTER, Spain
- [P2.69] **Polyhydroxyalkanoates (PHAs) from plastic waste materials to produce biopolymers for novel environmental and medical applications**  
B. Johnston\*<sup>1</sup>, D. Hill<sup>1</sup>, M. Kowalczyk<sup>1,2</sup>, I. Kwiecien<sup>2</sup>, J. Rydz<sup>2</sup>, J. Gonzalez Ausejo<sup>3</sup>, I.K. Radecka<sup>1</sup>, <sup>1</sup>University of Wolverhampton, UK, <sup>2</sup>Polish Academy of Sciences, Poland, <sup>3</sup>Universitat Jaume I/Castelló de la Plana, Spain
- [P2.70] **Green seed-induced fly ash zeolitization at room temperature**  
B. Barbov<sup>1</sup>, Y. Kalvachev\*<sup>2</sup>, <sup>1</sup>Institute of Mineralogy and Crystallography, Bulgaria, <sup>2</sup>Bulgarian Academy of Sciences, Bulgaria
- [P2.71] **Organic acid leaching of lithium and cobalt from spent lithium-ion batteries and regeneration with hydrothermal synthesis**

X. Lu\*<sup>1</sup>, X. Lin<sup>1</sup>, T. Mak<sup>1</sup>, Y. Tang<sup>2</sup>, B. Wang<sup>3</sup>, C.W. Tsang<sup>1</sup>, Y. Mao<sup>4</sup>, <sup>1</sup>Technological and Higher Education Institute of Hong Kong, Hong Kong, <sup>2</sup>South University of Science and Technology of China, China, <sup>3</sup>Hong Kong Applied Science and Technology Research Institute Company Limited, Hong Kong, <sup>4</sup>Shenzhen University, Hong Kong

- [P2.72] **Influence of the molar concentration of NaOH during metal removal using zeolites synthesized from coal fly ash**  
L. Martinez\*<sup>1</sup>, F. Trejo<sup>1</sup>, G. Peña-Rodríguez<sup>2</sup>, <sup>1</sup>Instituto Politécnico Nacional, Mexico, <sup>2</sup>Universidad Francisco de Paula Santander, Colombia
- [P2.73] **Waste-based alkali-activated materials for environmental remediation applications**  
R.M. Novais\*, M.P. Seabra, J.A. Labrincha, Aveiro University, Portugal
- [P2.74] **A novel core-shell recycled plastic aggregate from WEEE plastic and Portland cement**  
M. Gómez<sup>1</sup>, L.E. Peisino\*<sup>1</sup>, J. Kreiker<sup>1</sup>, R. Gaggino<sup>1</sup>, M. Angelelli<sup>2</sup>, S. Martín<sup>3</sup>, P. Uberman<sup>3</sup>, A.L. Cappelletti<sup>1</sup>, <sup>1</sup>Centro Experimental de la Vivienda Económica (CEVE), Argentina, <sup>2</sup>Instituto de Tecnología Industrial (INTI), Argentina, <sup>3</sup>Instituto de Fisicoquímica de Córdoba (INFIQC), Argentina
- [P2.75] **Investigation of a biodiesel process based on waste cooking oil in a microreactor at high pressure and temperature and in-situ analytics**  
G. Rinke\*<sup>1</sup>, J. Kieh<sup>1</sup>, F. Rinkewitz<sup>1</sup>, D. Conrad<sup>1</sup>, A. Ewinger<sup>1</sup>, A. Urban<sup>1</sup>, R. Dittmeyer<sup>1</sup>, C. Protze<sup>2</sup>, <sup>1</sup>Karlsruhe Institute of Technology, Germany, <sup>2</sup>Biowerk Sohland GmbH, Germany
- [P2.76] **Assessment ashes from biomass combustion in a conical spouted bed**  
J.F. Saldarriaga\*<sup>1</sup>, R. Aguado<sup>2</sup>, A. Aguayo<sup>2</sup>, M. Olazar<sup>2</sup>, <sup>1</sup>Universidad de los Andes, Colombia, <sup>2</sup>University of the Basque Country, Spain
- [P2.77] **Fast characterization of coffee pulp by thermogravimetric analysis (TGA)**  
M. Granados, M.P. Benjumea, J.A. Patiño, F. Rodríguez, J.F. Saldarriaga\*, Universidad de los Andes, Colombia
- [P2.78] **Chromate recovery from secondary waste Streams by adsorption onto layered double hydroxide (LDHs) type materials**  
E.M. Seftel\*<sup>1</sup>, B. Michielsen<sup>1</sup>, V. Meynen<sup>2</sup>, P. Cool<sup>2</sup>, S. Mullens<sup>1</sup>, <sup>1</sup>VITO Flemish Institute for Technological Research, Belgium, <sup>2</sup>University of Antwerp, Belgium
- [P2.79] **Development of functional foods from xylan rich agricultural source: A biorefinery approach for lignocellulosic waste utilisation**  
R. Singh\*<sup>1</sup>, A. Arora<sup>1</sup>, J. Muir<sup>2</sup>, A. Patti<sup>2</sup>, <sup>1</sup>Indian Institute of Technology Bombay, India, <sup>2</sup>Monash University, Australia
- [P2.80] **Recycling of carbon fibres: Overview of emerging processes and comparative anticipatory life cycle assessment**  
B. Pillain<sup>1</sup>, P. Loubet<sup>2,3</sup>, D. Schrijvers<sup>2,3</sup>, G. Sonnemann\*<sup>2,3</sup>, <sup>1</sup>Altran, France, <sup>2</sup>University of Bordeaux, France, <sup>3</sup>CNRS, France
- [P2.81] **Synthesis and characterization of zeolites obtained from fly ash using different times of preparation and their evaluation in metals removal from contaminated water**  
F. Trejo\*<sup>1</sup>, L. Martinez<sup>1</sup>, G. Peña<sup>2</sup>, <sup>1</sup>Instituto Politécnico Nacional, Mexico, <sup>2</sup>Universidad Francisco de Paula Santander, Colombia
- [P2.82] **Collectable silica based adsorbent from volcanic ash for polluted water treatment**  
E.T. Wahyuni\*, R. Roto, M. Mudasir, Gadjah Mada University, Indonesia
- [P2.83] **Photocatalyst of TiO<sub>2</sub>/Ag-nanoparticle as visible responsive antibacterial agent for drinking water**  
E.T. Wahyuni\*, R. Roto, D. Novasari, Gadjah Mada University, Indonesia
- [P2.84] **Green synthesis of copper oxide nanoparticles as a potential bioactive compound towards pro-angiogenic and antibacterial activities**  
S. Rajalakshmi\*, D. RajPreeth, M. Shairam, Anna University, India
- [P2.85] **Pushing the boundaries of iridium-based and metal-free photoredox catalysis with spectroscopic and DFT methods**  
A. Juneau\*<sup>1,2</sup>, M. Mesko<sup>1,3</sup>, J. McNeill<sup>1,4</sup>, Y. Gagné<sup>1</sup>, T. Hope<sup>1</sup>, M.S. Oderinde<sup>1,2</sup>, M. Frenette<sup>1</sup>, <sup>1</sup>Université du Québec à Montréal, Canada, <sup>2</sup>Pfizer Medicine Design & Oncology Medicinal Chemistry, USA, <sup>3</sup>McGill University, Canada, <sup>4</sup>University of Prince Edward Island, Canada
- [P2.86] **Surfactant-assistant hydrothermal synthesis of nanocrystalline hydroxyapatite from phosphogypsum waste**  
H. Bensalah\*<sup>1,2</sup>, M.F. Bekheet<sup>1</sup>, S. Alami Younssi<sup>2</sup>, M. Ouammou<sup>2</sup>, A. Gurlo<sup>1</sup>, <sup>1</sup>Technical University of Berlin, Germany, <sup>2</sup>University Hassan II of Casablanca, Morocco
- [P2.87] **Adsorption of residual palm oil from palm oil mill effluent using recycled polypropylene micro/nanofiber**

[P2.88]

**Wastes for cleaning water: Evaluation of chicken feathers for metal ions removal**

M.D. Álvarez-del-Castillo\*<sup>1,2</sup>, M.A. Bin Hanif<sup>1</sup>, N. Garrido<sup>1</sup>, G. Molins<sup>1</sup>, M. Casadesús<sup>1,2</sup>, J. Macanás<sup>1</sup>, F. Carrillo<sup>1,2</sup>, <sup>1</sup>*Universitat Politècnica de Catalunya, Spain*, <sup>2</sup>*INTEXTER, Spain*