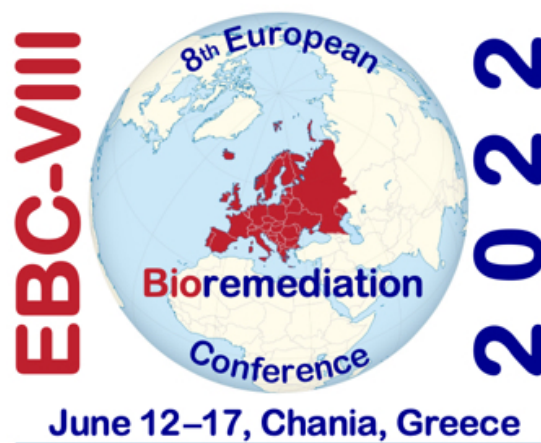


Conference Programme



(as of June 14, 2022)

REGISTRATION DESK IS OPEN:

Sunday afternoon (June 12):	13:00 – 18:30
Monday and Tuesday (June 13-14):	08:00 – 13:30 & 17:00 – 20:30
Wednesday and Thursday (June 15-16):	08:00 – 13:30

SUNDAY, JUNE 12 TH , 2022	
18:30 - 19:20	WELCOME PLENARY – ROOM A Chairpersons: Nicolas Kalogerakis & Fabio Fava
ID 191	ELECTROBIOREMEDIATION, A NEW PLAYER IN THE WATER SECTOR: CASE STUDIES Professor Abraham Esteve Núñez <i>Chemical Engineering Department, University of Alcalá, Madrid, Spain</i>
20:00 - 22:00	Ice-breaker & Welcome Party at Conference Venue (Minoa Palace Hotel, next to the pool of the North Building – Conference Center near the beach)

MONDAY, JUNE 13 TH , 2022	
09:00 - 09:40	Opening Ceremony – ROOM A
	N. Kalogerakis, F. Fava, Conference co-Chairs N. Kalogeris, Region of Crete E. Diamantopoulos, Rector, Technical University of Crete
09:40 - 10:30	PLENARY LECTURE #1 – ROOM A Chairpersons: Nicolas Kalogerakis & Fabio Fava
ID 187	BACTERIA FEEDING ON ANTIBIOTICS - EATING THE POISONOUS. THE CASE OF <i>MICROBACTERIUM BRI</i> AND <i>SULFONAMIDES B</i> Professor Philippe Corvini <i>Institute for Ecopreneurship, School of Life Sciences, FHNW (Switzerland)</i>
10:30 - 11:00	Coffee break & Poster set up

11:00 - 13:00		SESSION - 1A: Marine Pollution and Blue Biotechnology – I (ROOM A) Chairpersons: Concetta M. Messina & Danny Reible	
ID 196 Keynote	MARINE BIOTECHNOLOGY IN SUPPORT OF THE AGENDA 2030 FOR THE SUSTAINABLE DEVELOPMENT GOALS (SDGS) <u>Concetta Maria Messina</u> Department of Earth and Marine Science, Università degli Studi di Palermo, Italy		
ID 44	SPONGES: POTENTIAL BIOFILTERS FOR THE REMEDIATION OF POLLUTED AQUACULTURE REGIONS? <u>Despoina Varamogianni-Mamatsi</u> ^{1,2} , T.I. Anastasiou ¹ , E. Vernadou ¹ , N. Kouvarakis ¹ , E. Kagiampaki ¹ , N. Kalogerakis ² , T. Dailianis ^{1*} and M. Mandalakis ^{1*} ¹ Inst. of Marine Biology, Biotech. & Aquaculture, Hellenic Centre for Marine Research, Heraklion, Greece ² School of Chemical and Environmental Engineering, Technical University of Crete, Chania, Greece		
ID 93	THE RED SEA, AN EXTREME OCEAN YIELDING NOVEL HYDROCARBON-DEGRADING PROKARYOTES <u>Daniele Daffonchio</u> , G. Michoud, G. Merlino, A. Barozzi, F.O. Sefrji and R. Marasco Red Sea Research Center (RSRC), Biological and Environmental Sciences and Engineering Division (BESE), King Abdullah University of Science and Technology (KAUST), Saudi Arabia		
ID 50	ENRICHMENT OF PIEZOTOLERANT HYDROCARBON DEGRADERS FROM DEEP WATER COMMUNITIES OF THE EASTERN MEDITERRANEAN SEA <u>Georgia Charalampous</u> ¹ , E. Fragkou ¹ , N. Kalogerakis ^{1,2} , E. Antoniou ^{1,3} , E. Gontikaki ^{1,3} ¹ School of Chemical and Environmental Engineering, Technical University of Crete, Chania, Greece ² Institute of GeoEnergy, Foundation for Research and Technology Hellas, Chania, Greece ³ School of Mineral Resources Engineering, Technical University of Crete, Chania, Greece		
ID 116	OIL PLUME DEGRADATION BY UNDISTURBED DEEP SEA MICROBIAL COMMUNITIES, USING A NOVEL HIGH-PRESSURE APPARATUS E. Antoniou ^{1,2} , <u>Efsevia Fragkou</u> ¹ , G. Charalampous ¹ , D. Marinakis ² , N. Kalogerakis ^{1,3} , E. Gontikaki ³ ¹ School of Chemical and Environmental Engineering, Technical University of Crete, Chania, Greece ² School of Mineral Resources Engineering, Technical University of Crete, Chania, Greece ³ Institute of GeoEnergy, Foundation for Research and Technology Hellas, Chania, Greece		
ID 197	LOBSTERS AS EU MSFD MARINE POLLUTION BIOINDICATORS. PRELIMINARY RESULTS <u>Thodoros E. Kampouris</u> ¹ , E. Syranidou ² , P. Seridou ² , K. Gagoulis ² , I. E. Batjakas ¹ and N. Kalogerakis ² ¹ Department of Marine Sciences, School of the Environment, University of the Aegean. ² School of Chemical & Environmental Engineering, Technical University of Crete, Chania, Greece.		
FLASH ORAL PRESENTATIONS:			
ID 45	BIOSTIMULATION EFFECT OF DIFFERENT PHAs ON A MARINE PCB DECHLORINATING MICROBIAL COMMUNITY A. Botti ¹ , <u>Giulio Zanaroli</u> ¹ and F. Fava ³ ¹ Dept. of Civil, Chemical, Environmental and Materials Engineering – DICAM, Bologna, Italy,		
ID 51	COMPARISON OF HYDROCARBON-DEGRADING CONSORTIA FROM SURFACE AND DEEP WATERS OF THE EASTERN MEDITERRANEAN SEA <u>Georgia Charalampous</u> ¹ , E. Fragkou ¹ , K.A. Kormas ² , A.B. De Menezes ³ , P.N. Polymenakou ⁴ , N. Pasadakis ^{5,6} , N. Kalogerakis ^{1,6} , E. Antoniou ^{1,5} , and E. Gontikaki ^{1,6} ¹ School of Chemical and Environmental Engineering, Technical University of Crete, Chania, Greece ² Dept of Ichthyology and Aquatic Environment, University of Thessaly, 38446 Volos, Greece ³ School of Biology and Environmental Science, University College Dublin, Belfield, Ireland ⁴ Institute of Marine Biology, Biotechnology and Aquaculture, HCMR, Heraklion, Greece ⁵ School of Mineral Resources Engineering, Technical University of Crete, Chania, Greece ⁶ Institute of Geoenergy, Foundation for Research and Technology Hellas, Chania, Greece		
11:00 - 13:00		SESSION - 1B: Bioremediation of Contaminated Sites-I (ROOM B) Chairpersons: Simona Di Gregorio & Isabel Nogues	
ID 121	TEAM WORK AMONG CIBORIA SP. AND BACTERIA TO THE DEPLETION OF TPH IN HISTORICALLY POLLUTED SOIL I. Chicca ^{1,3} , S. Becarelli ^{1,2} , D.B. Levin ^{2,3} , C. Masini ⁴ , <u>Simona Di Gregorio</u> ¹ ¹ Dept of Biology, University of Pisa, Pisa, Italy; ² BD Biodigressioni, Pisa, Italy ³ Dept of Biosystem Engineering, University of Manitoba, Winnipeg, Canada ⁴ DND Biotech, Pisa, Italy		
ID 73	COMBINATION OF BIOLOGICAL DENITRIFICATION AND CHEMICAL REDUCTION WITH nZVI THE REMOVAL OF NITRATE FROM GROUNDWATER Oriol Gibert ¹ , D. Sánchez ² , J.L. Cortina ^{1,3}		
Cancelled			

Cancelled

	¹ Chemical Engineering Department, EEBE, Universitat Politècnica de Catalunya (UPC)-BarcelonaTech, c/Eduard Maristany 10-14, Barcelona, Spain ² Cetaqua-Water Technology Centre, c/ Severo Ochoa 7, Málaga, Spain ³ Cetaqua-Water Technology Centre, Carretera d'Esplugues 75, Cornellà de Llobregat, Spain
ID 131	EFFECT OF SOIL AMENDMENTS ON SHORT TERM Sb AND Pb MOBILIZATION FROM SHOOTING RANGE SOILS <u>Lara da Costa</u>^{1,2}, B. Bühlmann¹, M. F. Lehmann², M. Lenz¹ ¹ Institute for Ecopreneurship, School of Life Sciences, FHNW, Muttensz, Switzerland ² University of Basel, Dept of Environmental Science; Basel, Switzerland
ID 22	APPLICATION OF AN ALL-IN-ONE ISCO TECHNOLOGY FOR THE TREATMENT OF HYDROCARBONS, BTEX AND MTBE AT A FORMER RETAIL PETROL STATION IN ITALY <u>Alberto Leombruni</u> and M. Mueller Evonik Active Oxygens, LLC, United States
ID 17	BIOREMEDIATION OF AN OIL SPILL-CONTAMINATED SITE BY PHYTOREMEDIATION AND BIOPILE TECHNOLOGIES P. Angelini¹, M. Pianu¹, M. Mancini¹, G. Cerutti², A. Francioli², S. Citterio³, E. Casati³, A. Franzetti^{3,4}, <u>Tatiana Stella</u>⁴ ¹ Eni-Energy Evolution Green / Traditional Refining & Marketing, Italy ² HPC Italia Srl, Milano, Italy ³ Dept of Earth and Environmental Sciences, University of Milano-Bicocca, Milano, Italy ⁴ M3R-Monitoring and Management of Microbial Resources Srl, Milano, Italy
ID 140	HYDROCARBON BIOREMEDIATION STUDIES IN PORTUGUESE SOIL SAMPLES S. Almeida¹, <u>Fátima Nunes Serralha</u>^{1,2}, C. Coelho^{1,2} ¹ Escola Superior de Tecnologia do Barreiro, Instituto Politécnico de Setúbal, Portugal ² CiQuiBio, Instituto Politécnico de Setúbal, Portugal
FLASH ORAL PRESENTATIONS:	
ID 81	IN-SITU INTEGRATED BIOLOGICAL APPROACHES FOR THE REMEDIATION AND THE REQUALIFICATION OF A HYDROCARBON POLLUTED URBAN AREA <u>Crognale Silvia</u>¹, R. Cristina¹, L. Davide¹, L. Dario¹, L.G. Valsecchi², D. Lia³, De Angelis Paolo¹ ¹ DIBAF University of Tuscia, Viterbo, Italy ² Municipality of Pesaro, Italy ³ Regional Agency for the Environmental Protection of Marche, Italy
ID 71	COMBINED ADDITION OF BIOCHAR, BIOACTIVATORS AND PLANTS AS A SYNERGIC STRATEGY FOR THE TREATMENT OF PETROLEUM HYDROCARBON-CONTAMINATED SOIL V. Mazzurco Miritana¹, L. Passatore¹, M. Zacchini¹, F. Pietrini¹, S. Carloni¹, E. Peruzzi², S. Marinari³, L. Massaccesi³, A. Barra Caracciolo⁴, P. Grenni⁴, L. Rolando⁴, <u>Isabel Nogues</u>¹ ¹ Research Inst. on Terrestrial Ecosystems, National Research Council (IRET-CNR), Rome, Italy ² Research Inst. on Terrestrial Ecosystems, National Research Council (IRET-CNR) Pisa, Italy ³ Dept for Innovation in Biological, Agro-food and Forest systems DIBAF – Univ. of Tuscia, Viterbo, Italy ⁴ Water Research Institute, National Research Council (IRSA-CNR) Montelibretti, Rome, Italy
ID 101	CRITICAL MICELLAR CONCENTRATION AND EMULSIFYING ACTIVITY OF A BIOSURFACTANT PRODUCED BY A PERUVIAN NATIVE STRAIN <i>Pseudomonas aeruginosa</i> 6K-11 P. Obregon, F. Merino and <u>Susana Gutierrez</u> Microbiology and Microbial Biotechnology Laboratory, Biological Sciences Faculty, Universidad Nacional Mayor de San Marcos, Lima, Lima, Peru
13:00 - 14:00	LUNCH (Minoa Palace Hotel)
14:00 - 17:00	FREE TIME

17:00 - 17:30	SESSION - 2A-I: Marine Pollution and Blue Biotechnology – II (ROOM A) Chairpersons: Argyro Tsipa & Evina Gontikaki
ID 01	ASSESSING SEDIMENT RECONTAMINATION AND BIOACCUMULATION BY STORMWATER HEAVY METALS Ilektra Drygiannaki¹, D. Reible¹, B. Rao¹, J.A. Dawson¹, M. Rakowska¹, M. Bejar¹, N.T. Hayman², G. Rosen², M.A. Colvin², B. Chadwick², R. Pitt³, B. Steets⁴, M. Otto⁴, and J. Ervin⁴ ¹ Texas Tech University, Lubbock, TX, USA ² Naval Information Warfare Center Pacific, 4301 Pacific Highway San Diego, CA, USA ³ University of Alabama, Ret., Tuscaloosa, AL, USA ⁴ Geosyntec Consultants, USA
FLASH ORAL PRESENTATIONS:	
ID 83	THE DIATOM PHAEODACTYLUM TRICORNUTUM MODULATES BIOACTIVE COMPOUNDS BIOSYNTHESIS IN RESPONSE TO ENVIRONMENTAL STRESS: FROM LAB SCALE TO APPLICATION IN AN INTEGRATED MULTITROPHIC AQUACULTURE SYSTEM Concetta Maria Messina¹, E. Curcuraci¹, S. Manuguerra¹, C. Hellio², A. Santulli^{1,2,3} ¹ Department of Earth and Marine Sciences DiSTeM, University of Palermo, Trapani, Italy ² Université de Brest, IRD, CNRS, Ifremer, LEMAR, F-29280 Plouzané, France ³ Istituto di Biologia Marina, Consorzio Universitario della Provincia di Trapani, Trapani, Italy
ID 132	DIATOMS FOR HEAVY METAL REMEDIATION: PRELIMINARY STUDIES FOR COPPER REMOVAL E. Cavalletti¹, P. Chiaiese², L. Barra³, A. Gallo⁴, M. Spinelli⁵, A. Amoresano⁵, <u>Giovanna Romano¹</u>, S. Balzano¹ and A. Sardo¹ ¹ Stazione Zoologica Anton Dohrn Napoli, Dept of Ecosustainable Marine Biotechnologies, Napoli, Italy ² University of Naples Federico II, Dept of Agricultural Sciences, Portici (NA), Italy ³ Stazione Zoologica Anton Dohrn Napoli, Dept of Ecosustainable Marine Biotechnologies, Amendolara (Cs) ⁴ Stazione Zoologica Anton Dohrn Napoli, Dept of Biology and Evolution of Marine Organisms, Italy ⁵ University of Naples Federico II, Department of Inorganic and Organic Chemistry, Napoli, Italy
17:30 - 18:30	SESSION - 2A-II: Water Issues (ROOM A) Chairpersons: Atef Jaouani & Tomáš Cajthaml
ID 181	TOWARDS INTEGRATED AND SUSTAINABLE WATER MANAGEMENT IN TUNISIA AS WATER STRESSED SOUTHERN MEDITERRANEAN COUNTRY <u>Atef Jaouani</u> Institut Supérieur des Sciences Biologiques Appliquées de Tunis, Université de Tunis El Manar, Tunisia
ID 130	PER- AND POLYFLUORINATED ALKYL SUBSTANCES (PFASs) IN AQUATIC ENVIRONMENTS IN CZECHIA <u>Tomáš Cajthaml</u> and J. Semerád Institute for Environmental Studies, Faculty of Science, Charles University, Prague, Czechia
FLASH ORAL PRESENTATIONS:	
ID 24	DISINFECTION OF WATER BY UV IN THE PRESENCE OF POLYETHYLENE MICROPLASTICS K. Manoli¹, <u>Andrea Naziri¹</u>, I. Ttofi¹, C. Michael¹, I.J. Allan² and D. Fatta-Kassinou^{1,3} ¹ Nireas-International Water Research Center, University of Cyprus, Nicosia, Cyprus. ² Norwegian Institute for Water Research, Oslo, Norway. ³ Dept of Civil and Environmental Engineering, University of Cyprus, Nicosia, Cyprus.
ID 172	MICROBIALY-INDUCED CARBONATE PRECIPITATION BY ARTHROBACTER, BACILLUS AND MICROCOCCUS SPECIES ISOLATED FROM MARINE SEDIMENTS P. Persianis¹, R. Fournari¹, I. Rigopoulos¹, I. Ioannou¹, <u>Argyro Tsipa^{1,2}</u> ¹ Department of Civil and Environmental Engineering, University of Cyprus, Nicosia, Cyprus ² Nireas International Water Research Center, University of Cyprus, Nicosia, Cyprus
ID 166	APPLICATION OF OZONATION IN DISINFECTION OF SALINE WATER: ENHANCED POTENTIAL FOR BALLAST WATER TREATMENT BY OZONE NANOBUBBLES TECHNOLOGY <u>Petroula Seridou</u> and N. Kalogerakis School of Chemical & Environmental Engineering, Technical University of Crete, Chania, Greece
17:00 - 18:05	SESSION - 2B-I: Mycoremediation and composting (ROOM B) Chairpersons: Jofre Herrero Ferran & Anestis Vlysidis

ID 04	A STEP FURTHER IN BIOREMEDIATION: MYCOREMEDIATION FOR SOIL RECOVERY <u>Jofre Herrero Ferran¹</u> , C. Bosch ¹ , F. Bagnato ² , N. Nägele ³ , C. Alcántara ³ , J. Diamantino- Miranda ³ , L. Thannberger ⁴ , S. Crognale ⁵ , E. Eymar ⁶ , C. García-Delgado ⁷ , I. Chicca ⁸ , C. Zaoui ⁸ , A. Fischer ⁹ ¹ Water, Air and Soil Unit, Eurecat - Technological Centre of Catalonia, Manresa, Spain ² Eni Rewind, San Donato Milanese, Italy ³ Kepler Ingeniería y Ecogestión SL, Burgos, Spain ⁴ VALGO, Petit-Couronne, France ⁵ Dept for Innovation in Biological, Agri-food and Forestry Systems, University of Tuscia, Tuscia, Italy ⁶ Dept of Agricultural Chemistry and Food Science, Universidad Autónoma de Madrid, Madrid, Spain ⁷ Dept of Geology and Geochemistry, Universidad Autónoma de Madrid, Madrid, Spain ⁸ Novobiom, Ottignies-Louvain-la-Neuve, Belgium ⁹ Isodetect, Leipzig, Germany
ID 149	DEGRADATION OF SELECTED ENDOCRINE DISRUPTORS DURING SEWAGE SLUDGE COMPOSTING <u>Katerina Sirova^{1,2}</u> , T. Cerna ¹ , A. Grasserova ^{1,2} and T. Cajthaml ^{1,2} ¹ Institute for Environmental Studies, Faculty of Science, Charles University, Czech Republic ² Institute of Microbiology of the Czech Academy of Sciences, Czech Republic
ID 57	A NOVEL APPROACH OF COMPOST MATURITY EVALUATION USING THE CIELAB COLOR MODEL D. Tsivas ¹ , A. Vlyssides ¹ , <u>Anestis Vlysidis^{1,2}</u> ¹ School of Chemical Engineering, National Technical University of Athens, Greece ² School of Chemical and Environmental Engineering, Technical University of Crete, Greece
FLASH ORAL PRESENTATIONS:	
ID 125	VERMIREMEDIATION OF MICROPOLLUTANTS FROM SEWAGE SLUDGE AND ITS EFFECT ON EARTHWORMS <u>Alena Grasserova^{1,2}</u> , N. Isabel Navarro Pacheco ^{1,3,4} , J. Semerad ^{1,2} , T. Cajthaml ^{1,2} ¹ Institute of Microbiology of the Czech Academy of Sciences, Prague, Czech Republic ² Faculty of Science, Institute for Environmental Studies, Charles University, Prague, Czech Republic ³ First Faculty of Medicine, Charles University, Prague, Czech Republic ⁴ Cavanilles Institute of Biodiversity and Evolutionary Biology, Univ. of Valencia, Paterna, Valencia, Spain
ID 118	DRAFT GENOME SEQUENCE OF CEPHALOTRICHUM SP. MUT 6686 (SORDARIO-MYCETES; MICROASCACEAE): INSIGHTS FOR MYCOREMEDIATION OF PETROLEUM-CONTAMINATED SITES. <u>Domenico Davolos</u> and B. Pietrangeli Dept of Techn. Innovations and Safety of Plants, Products and Anthropic Settlements, INAIL, Rome, Italy.
ID 114	GENOME SEQUENCING OF THE HCH-DEGRADING PENICILLIUM GRISEOFULVUM MUT 5854, FIRST GENETIC DATA INTO MYCOREMEDIATION OF HCH-POLLUTED SITES <u>Davolos Domenico¹</u> , C. Andrea ² , M. Oriana ² and P. Anna Maria ² ¹ Dept of Techn. Innovations and Safety of Plants, Products and Anthropic Settlements, INAIL, Rome, Italy. ² Dept of Environmental Biology, Sapienza University of Rome, Rome, Italy
ID 106	VERMICOMPOST IMPROVES THE BIOREMEDIATION EFFICIENCY IN AN AGED CONTAMINATED SOIL WITH RECALCITRANT HYDROCARBONS S. Curiel-Alegre ^{1,2} , <u>Blanca Velasco-Arroyo¹</u> , A. Martínez ² , C. Rumbo ¹ , A. Hassan-Ali Khan ¹ , J.A. Tamayo-Ramos ¹ , J.L.R. Gallego ³ , C. Rad ² and R. Barros ¹ ¹ ICCRAM, Universidad de Burgos, Edificio I+D+i, Burgos, Spain ² UBUCOMP, Universidad de Burgos, Facultad de Ciencias, Burgos, Spain ³ Environmental Biogeochemistry & Raw Materials Group and INDUROT, Mieres, Spain
18:05 - 18:30	SESSION - 2B-II: Biodegradation – I (ROOM B) Chairpersons: Simona Rosetti & Katerina Demnerova
ID 152	ELUCIDATING THE ANAEROBIC DEGRADATION OF THE 3-RING POLYCYCLIC AROMATIC HYDROCARBON PHENANTHRENE N. Samak, I. Kaplieva, I. Kraiselburd and <u>Rainer Meckenstock</u> University of Duisburg-Essen, Environmental Microbiology and Biotechnology, Essen, Germany
FLASH ORAL PRESENTATIONS:	
ID 128	BIODEGRADING BIOFILMS ON INNOVATIVE BIOPOLYMERIC SUPPORTS <u>Elisa Maria Petta¹</u> , M.C. Citarrella ² , R. Scaffaro ² , S. Cappello ³ , P. Quatrini ¹ and V. Catania ⁴ ¹ Dept of Biological, Chemical and Pharmaceutical Sciences and Technologies, University of Palermo, Palermo, Italy ² Dept of Engineering, University of Palermo, Palermo, Italy

	³ Inst. for Biological Resources and Marine Biotech., National Research Council (CNR) of Messina, Italy ⁴ Dept of Earth and Marine Sciences (DiSTeM), University of Palermo, Palermo, Italy
ID 178	<i>OCHROBACTRUM PITUITOSUM</i> STRAIN BU72, A NEW HYDROCARBONOCLASTIC BACTERIUM THROUGH EXOPOLYSACCHARIDE-BASED SURFACTANTS PRODUCTION M. Mahjoubi¹, H. Chouchane¹, H. Aliyu², Y. Souissi³, S. Cappello⁴, F. Mapelli⁵, S. Borin⁵, D. A. Cowan⁶, Ameer Cherif^{1*} ¹ Univ. Manouba, ISBST, BVBGR-LR11ES31, Biotechpole SidiThabet, Ariana, Tunisia ² Inst. of Process Eng. in Life Science 2: Technical Biology, Karlsruhe Inst. of Tech., Karlsruhe, Germany ⁴ Instituto per le Risorse Biologiche e le Biotecnologie Marine (IRBIM) – CNR of Messina, Messina, Italy ⁵ DeFENS- University of Milan via Celoria 2, 20133 Milan, Italy ⁶ Centre for Microbial Ecology and Genomics, University of Pretoria, Pretoria, South Africa
18:30 - 19:00	Coffee break & Poster Viewing
19:00 – 20:30	SESSION – 3A: Bioelectrochemical Systems for Bioremediation (ROOM A) Chairpersons: Philippe Corvini & Abraham Esteve-Núñez
ID 108	LABORATORY VALIDATION AND DEVELOPMENT OF AN UPSCALED FIELD TEST OF A SEQUENTIAL REDUCTIVE/OXIDATIVE BIOELECTROCHEMICAL PROCESS FOR CHLORINATED ALIPHATIC HYDROCARBONS REMOVAL IN CONTAMINATED GROUNDWATER Edoardo Dell'Armi, M. Zeppilli, M. Petrangeli Papini and M. Majone Department of Chemistry University of Rome Sapienza Piazzale Aldo Moro 5 00185 Rome Italy
ID 134	ANTIBIOTICS REMOVAL USING ELECTROACTIVE ANODIC BIOFILMS IN A SINGLE CHAMBER BIOELECTROCHEMICAL REACTOR Eduard Borràs¹, V. González², P. Solorzano-Vives², S. Lladó¹, P. Sánchez-Cueto¹, M. Aliaguilla¹ and A. Pérez-de-Mora³ ¹ LEITAT Technological Center, Circular Economy Dept, Terrassa, Spain ² LEITAT Technological Center, Circular Economy Dept, Barcelona, Spain ³ TAUW GmbH, Dept. of Soil & Groundwater, Munich, Germany
ID 145	BIOELECTROCHEMICAL REMEDIATION OF HEAVY METALS POLLUTED GROUNDWATER FROM INDUSTRIAL AREAS Martí Aliaguilla¹, P. Bosch-Jimenez², D. Molognoni², E. Borràs¹ H. De Wilde³ and A. Pérez-de-Mora⁴ ¹ LEITAT Technological Center, Circular Economy Department, Terrassa, Spain ² LEITAT Technological Center, Energy and Engineering Dept, Terrassa, Spain ³ Dept. of Soil & Groundwater, TAUW België nv, Lokeren, Belgium ⁴ Dept. of Soil & Groundwater, TAUW GmbH, Munich, Germany
ID 10	COUPLING OF ELECTRODIALYSIS AND BIO-ELECTROCHEMICAL SYSTEMS FOR METAL AND ENERGY RECOVERY FROM ACID MINE DRAINAGE Yelitza Delgado González, J. Llanos López and F.J. Fernández-Morales Chemical Engineering Dept, University of Castilla-La Mancha, Spain
ID 38	INFLUENCE OF ELECTRO-CONDUCTIVE FILTER MATERIALS IN CONSTRUCTED WETLAND REACTORS ON CO₂ AND CH₄ PRODUCTION Annegret Budach¹, G. Favoino^{1,2}, J. A. Müller^{1,3}, A. Miltner¹ and M. Kästner¹ ¹ Helmholtz Centre for Environmental Research, Dept of Environmental Biotechnology, Germany ² Dept of Computational and Quantitative Biology, Institute of Biology Paris Seine, France ³ Institute for Biological Interfaces, Karlsruhe Institute of Technology, Germany
	FLASH ORAL PRESENTATIONS:
ID 100	INTEGRATED SYSTEMS FOR EFFECTIVE ENVIRONMENTAL REMEDIATION Rocío Barros¹, B. Velasco Arroyo¹, A. Hassan Ali Khan¹, S. Curiel¹, E. Borràs², M. di Lorenzo³, A. Pérez-de-Mora⁴ and C. Rad⁵ ¹ International Research Center in Critical Raw Materials for Advanced Industrial Technologies (ICCRAM). University of Burgos, Burgos, Spain. ² LEITAT Technological Center, Circular Economy Dept, Terrassa, Barcelona, Spain ³ Dept of Chemical Engineering and Centre for Biosensors, Bioelectronics & Biodevices (C3Bio), University of Bath, Claverton Down, UK ⁴ TAUW GmbH, Dept. of Soil and Groundwater, München, Germany ⁵ Research Group in Composting (UBUCOMP). University of Burgos, Faculty of Sciences, Burgos Spain.

ID 47	INSIGHT THE SOIL MICROBIAL COMMUNITY OF TERRESTRIAL MICROBIAL FUEL CELLS PRODUCING BIOENERGY <u>Anna Barra Caracciolo¹</u> , G.L. Garbini ^{1,2} , L. Rolando ¹ , A. Visca ¹ , V. Ancona ³ , D. Borello ⁴ , G. Gagliardi ⁴ , C. Cosentini ⁴ , P. Grenni ¹ ¹ Water Research Institute, National Research Council (IRSA-CNR) Montelibretti, Rome, Italy ² Dept of Ecology and Biological Sciences, Tuscia University, Viterbo, Italy ³ Water Research Institute, National Research Council (IRSA-CNR) Bari, Italy ⁴ Dept of Mechanical and Aerospace Engineering, Sapienza University of Rome, Italy
ID 143	EFFECT OF GAMMA IRRADIATION PRETREATMENT ON THIABENDAZOLE DEGRADATION COUPLED TO ENERGY PRODUCTION BY BIOELECTRO-CHEMICAL PROCESS <u>Nesrine Saidi¹</u> , B. Erable ² , R. Chaouachi ¹ , S. Saadaoui ¹ , L. Etcheverry ² , A. Slaheddine Masmoudi ¹ , A. Cherif ¹ , H. Chouchane ¹ ¹ Univ. Manouba, ISBST, BVBGR-LR11ES31, Biotechpole Sidi Thabet, Ariana, Tunisia ² Laboratoire de Génie Chimique, Université de Toulouse, CNRS, INPT, UPS, Toulouse, France
19:00 – 20:30	SESSION – 3B: Biodegradation – II (ROOM B) Chairpersons: Katerina Demnerova & Simona Rosetti
ID 49	BIODEGRADATION OF GRAPE POMACE OF <i>VITIS VINIFERA</i> ASYRTIKO BY <i>CHLAMYDOMONAS REINHARDTII</i> <u>Maria Belenioti¹</u> , E. Mathioudaki ¹ , E. Spyridaki ³ , D. Ghanotakis ² and N. Chaniotakis ¹ ¹ Division of Analytical Chemistry, Dept of Chemistry, University of Crete, Voutes, Greece ² Division of Biochemistry, Dept of Chemistry, University of Crete, Voutes, Greece ³ Agrochemicals of Crete, Industrial Area of Heraklion, Heraklion, Greece
ID 84	FACTORS DETERMINING THE MICROBIAL CONTAMINATION OF AUDIO-VISUAL MATERIALS <u>Kateřina Demnerová</u> , T. Branyšová, M. Durovic and H. Stiborova Dept of Biochemistry and Microbiology, Univ. of Chemical Technology Prague, Prague, Czechia
ID 18	SIZE DISTRIBUTION OF AIRBORNE MICROBES IN A MUSEUM ENVIRONMENT <u>Eleftheria Katsivela¹</u> , A. Raisi ^{1,2} , A. Saridaki ² , T. Glytsos ² , N. Kalogerakis ² and M. Lazaridis ² ¹ Dept of Electronic Engineering, Hellenic Mediterranean University, Chania, Greece ² School of Chemical & Environmental Engineering, Technical University of Crete, Chania, Greece
ID 96	CULTURE-DEPENDENT AND IN SILICO APPROACH TO ISOLATE AND STUDY HYDROCARBUROCLASTIC AND PGPR BACTERIA Ilaria Chicca ¹ , S. Becarelli ^{1,2} , G. Bernabei ¹ , G. Siracusa ¹ and <u>S. Di Gregorio¹</u> ¹ Department of Biology, University of Pisa, Italy ² BD Biodigressioni srl, Pisa, Italy
FLASH ORAL PRESENTATIONS:	
ID 21	DEGRADATION OF PESTICIDES BY SELECTED BACTERIAL ISOLATES <u>Petra Lovecka¹</u> , B. Vrchotova ¹ , J. Volkova ² and K. Demnerova ¹ ¹ Dept of Biochemistry and Microbiology, Univ. of Chemical Technology Prague, Prague, Czechia ² MONAS Technology, Czechia
ID 32	PHARMACEUTICALS IN THE IS THE LARGEST CENTRAL EUROPEAN SHALLOW LAKE: BIODEGRADATION POTENTIAL OF THE INDIGENOUS MICROBES <u>Milán Farkas</u> , P. Harkai, M. Awode Funmilayo, T. Benedek, J. Háhn, G. Tóth, A. Tánicsics, B. Kriszt and S. Szoboszlai Institute of Aquaculture and Environmental Safety, Hungarian University of Agriculture and Life Sciences.
ID 150	ANAEROBIC BIODEGRADATION OF PFAS IN A CONTAMINATED GROUNDWATER INCUBATED UNDER DIFFERENT TERMINAL ELECTRON ACCEPTING PROCESSES F. Bruni ¹ , A. Negroni ¹ , P. Pretto ² , C. Indorato ³ , E. Biagi ¹ , F. Fava ¹ and <u>Giulio Zanaroli¹</u> ¹ Dept. of Civil, Chemical, Environmental and Materials Engineering – DICAM, Univ. of Bologna, Italy ² AIPU Associazione Internazionale Progetti Unesco, Italy ³ Acque Veronesi s.c.a r.l., Italy
ID 184	NOVEL NONYLPHENOL-DEGRADING BACTERIAL STRAIN ISOLATED FROM SEWAGE SLUDGE FOR ITS BIOREMEDIATION <u>Esmeralda Morillo¹</u> , I. Aguilar-Romero ¹ , A. Lara-Moreno ^{1,2} , F. Madrid ¹ , J. Villaverde ¹ ¹ Institute of Natural Resources and Agrobiology of Seville (IRNAS), CSIC, Seville, Spain ² Dept of Microbiology and Parasitology, Faculty of Pharmacy, University of Seville, Seville, Spain
ID 186	ACETAMINOPHEN BIODEGRADATION BY BACTERIAL STRAINS ISOLATED FROM ENRICHMENT CULTURES OF SEWAGE SLUDGE A. Vargas-Ordóñez, I. Aguilar-Romero, <u>Esmeralda Morillo</u> and J. Villaverde Institute of Natural Resources and Agrobiology of Seville (IRNAS), CSIC, Seville, Spain

TUESDAY, JUNE 14 TH , 2022	
8:30 - 9:15	PLENARY LECTURE #3 – ROOM A Chairpersons: Nicolas Kalogerakis & Fabio Fava
ID 188	TERMINUS PROJECT: PAVING THE WAY FOR CIRCULAR AND RECYCLABLE PLASTIC MULTILAYERS Dr Vincent Verney <i>Recycle-Consulting / CNRS / Sigma Clermont / Clermont Auvergne University</i>
9:15 - 10:45	SESSION - 4A: Plastics & MPs: fragmentation, monitoring, biodegradation, fate, recycling - I – ROOM A Chairpersons: Edoardo Puglisi and Evdokia Syranidou
ID 194 Keynote	NOVEL TALES FOR ANCIENT CONTAMINANTS: IMPACTS AND FATES OF PLASTICS IN TERRESTRIAL ENVIRONMENTS Edoardo Puglisi Faculty of Agricultural, Food & Environmental Sciences, Università Cattolica del Sacro Cuore, Italy
ID 153	FATE OF BIOPLASTICS IN AGRICULTURAL SOILS Evdokia Syranidou, A. Fountoulakis, E. Chroni, K. Karkanorachaki and N. Kalogerakis School of Chemical & Environmental Engineering, Technical University of Crete, Chania, Greece
ID 92	MICROBIAL IMPACTS OF BIOPLASTICS' ITEMS TREATED WITH ORGANIC FRACTION OF MUNICIPAL SOLID WASTE (OFMSW) Francesca Bandini, F. Vaccari, E. Taskin, C. Misci, G. Bellotti, P. S. Cocconcetti and E. Puglisi Dipartimento di Scienze e Tecnologie Alimentari per la sostenibilità della filiera agro-alimentare, Università Cattolica del Sacro Cuore, Piacenza, Italy
ID 159	TOXICOLOGICAL EFFECTS OF ENVIRONMENTAL MICROPLASTIC CAN MODIFY GUT MICROBIOTA HOMEOSTASIS AND METABOLOME PROFILE IN MARINE POLYCAETE O. Missawi¹, Filippo Vaccari², B. Miras-Moreno³, I. Boughattas⁴, F. Bandini², N. Bousserhine⁵, S. Belbekhouche⁶, L. Lucini³, E. Puglisi², M. Banni^{1,7} ¹ Lab of Agrobiodiversity and Ecotoxicology, Higher Inst. of Agronomy, Univ. of Sousse, Sousse, Tunisia ² Dip di Scienze e Tecnologie Alimentari per la sostenibilità della filiera agro-alimentare, Università Cattolica del Sacro Cuore, Piacenza, Italy ³ Dept for Sustainable Food Process, Università Cattolica del Sacro Cuore, Piacenza, Italy ⁴ Regional Field Crops Research Center of Beja, Tunisia ⁵ Faculty of Science and Technology, University Paris-Est Creteil, Creteil Cedex, France ⁶ CNRS, Institute of Chemistry and Materials Paris-Est ICMPE, Thiais, France ⁷ Higher Institute of Biotechnology Monastir, University of Monastir, Monastir, Tunisia
ID 115	THE IMPACT OF THERMAL PRETREATMENT AND ANAEROBIC DIGESTION ON THE DEGRADATION OF BIOPLASTIC BAG MIXED WITH FOOD WASTE A. Gallipoli¹, C. Pastore², G. Gazzola¹, A. Gianico¹, B. Tonanzi¹, Camilla M. Braguglia¹ ¹ Water Research Institute (IRSA-CNR), Monterotondo, Rome, Italy ² Water Research Institute (IRSA-CNR), Bari, Italy
FLASH ORAL PRESENTATIONS:	
ID 05	THE POTENTIAL FOR PHYTOREMEDIATION OF MICROPLASTICS WITH AQUATIC MACROPHYTE <i>LEMNA MINOR</i> Ula Rozman and G. Kalčíková University of Ljubljana, Faculty of Chemistry and Chemical Technology, Ljubljana, Slovenia
ID 31	EVALUATION OF MP ECOTOXICITY AND TRANSFER IN <i>SPIRODELA-ECHINOGAMMARUS</i> TROPHIC SYSTEM V. Iannilli¹, F. Lecce¹, G. Sciacca¹, F. Pietrini², Laura Passatore², S. Carloni² and M. Zacchini² ¹ ENEA, Agenzia nazionale per le nuove tecnologie, l'energia e lo sviluppo economico sostenibile, Dip. Sostenibilità dei Sistemi Produttivi e Territoriali, Roma, Italy ² Istituto di Ricerca sugli Ecosistemi Terrestri (IRET), Consiglio Nazionale delle Ricerche (CNR), Monterotondo Scalo, Roma, Italy
ID 68	FUNGAL COMMUNITY SUCCESSION OF THE SOUTH-EASTERN MEDITERRANEAN PLASTISPHERE Katerina Karkanorachaki, E. Syranidou and N. Kalogerakis School of Chemical & Environmental Engineering, Technical University of Crete, Chania, Greece

9:15 - 10:45		SESSION – 4B: Microalgae – ROOM B	
		Chairpersons: András Táncsics & Edgardo Filippone	
ID 157	EFFECTIVE MICROALGAE HARVESTING AND DRYING PROCESSES IN A LAB-SCALE PHOTO-BIOREACTOR <u>Georgios Makaroglou, R. Kompogennitaki, E. Tsantopoulou, P. Gikas and N. Kalogerakis</u> School of Chemical & Environmental Engineering, Technical University of Crete, Chania, Greece		
ID 20	DEVELOPMENT OF A BIOENERGETIC STRATEGY FOR THE BIOREMEDIATION OF CHEESE WHEY BY GREEN MICROALGAE <u>Napoleon-Christoforos Stratigakis¹, T. Nazos¹, M. Chatzopoulou¹, A. Lagouvardou-Spantidaki², M. Spantidaki² and D. Ghanotakis¹</u> ¹ Dept of Chemistry, University of Crete, Vasilika Voutes, Heraklion, Crete, Greece ² Chemicotechniki Laboratories, Rethymno, Crete, Greece		
ID 156	BIOTECHNOLOGICAL POTENTIAL OF MARINE MICROALGAE <u>F. Di Costanzo, V. Di Dato, I. Orefice, Giovanna Romano</u> Stazione Zoologica Anton Dohrn Napoli, Ecosustainable Marine Biotechnology Dept, Napoli, Italy		
ID 62	BIOREMEDIATION OF DAIRY COW MANURE: MICROALGAE SELECTION AND NUTRIENT RECOVERY <u>G. D'Ambrosio, S. G. Di Rauso, M. Antonietta Rao, P. Chiaiese and Edgardo Filippone</u> Dept of Agriculture Sciences, University of Naples Federico II, Portici, Italy		
10:45 – 11:15		Coffee break & Poster Viewing	
11:15 – 13:30		SESSION - 5A: Plastics & MPs: fragmentation, monitoring, biodegradation, fate, recycling - II (ROOM A)	
		Chairpersons: Stefania Federici and Basak Öztürk	
ID 193 Keynote	PRIORITY: CONNECTING COMMUNITIES WORKING ON MICRO- AND NANOPLASTICS <u>Stefania Federici</u> Chem-Bio-Nano Division, Dept of Mechanical and Industrial Engineering, University of Brescia, Italy		
ID 34	PLASTISPHERE ASSEMBLY DYNAMICS ON PCB-CONTAMINATED MICROPLASTICS IN ANOXIC SALT MARSH SEDIMENTS <u>Elena Biagi¹, A. Rosato¹, M. Barone², A. Negroni¹, F. Fava¹, M. Candela² and G. Zanaroli¹</u> ¹ Dept. of Civil, Chemical, Environmental and Materials Engineering – DICAM, University of Bologna, Italy ² Dept. of Pharmacy and Biotechnology – FABIT, University of Bologna, Italy		
ID 141	BIODEGRADATION OF UNPRETREATED POLYETHYLENE FILMS BY MARINE PURE BACTERIAL ISOLATES AND ARTIFICIAL CONSORTIA <u>Kejvin Bajo, R. Romano, F. Fava and N. Raddadi</u> Dept. of Civil, Chemical, Environmental and Materials Engineering – DICAM, University of Bologna, Italy		
ID 164	DEGRADATION OF BIOPLASTICS (PLA, TPS, BIO-PE AND rTPS) IN THE MARINE ENVIRONMENT <u>Giorgia Barale^{1,2}, K. Karkanorachaki¹, A. Fountoulakis¹, M. Bruno², E. Syranidou¹, S. Fiore², N. Kalogerakis¹</u> ¹ School of Chemical and Environmental Engineering, Technical University of Crete, Greece ² DIATI (Dept of Engineering for Environment, Land, and Infrastructures), Politecnico di Torino, Italy		
ID 165	NANOPLASTIC GENERATION FROM SECONDARY PE MICROPLASTICS: MICROORGANISM-INDUCED FRAGMENTATION <u>Katerina Karkanorachaki¹, P. Tsiota¹, G. Dasenakis¹, E. Syranidou¹, N. Kalogerakis^{1,2}</u> ¹ School of Chemical and Environmental Engineering, Technical University of Crete, Greece ² Institute of GeoEnergy, Foundation for Research and Technology - Hellas, Chania, Greece		
ID 161	INVESTIGATING THE DEGRADATION OF THREE BIODEGRADABLE BIOPOLYMERS BY A MARINE CONSORTIUM USING METAGENOMICS AND PROTEOMICS <u>I.E. Meyer Cifuentes¹, N. Jehmlich², Julius Degenhardt¹ and B. Öztürk¹</u> ¹ Junior Research Group Microbial Biotechnology, Leibniz Institute DSMZ-German Collection of Microorganisms and Cell Cultures, Braunschweig, Germany ² Dept of Molecular Systems Biology, Helmholtz-Centre for Environmental Research-UFZ, Leipzig, Germany		
ID 169	CHARACTERIZATION OF TWO NOVEL TANDEM PETASES FROM A MARINE MICROBIAL CONSORTIUM <u>I. Meyer Cifuentes¹, L. Pfaff², R. Wei² and Basak Öztürk¹</u>		

	¹ Junior Research Group Microbial Biotechnology, Leibniz Institute DSMZ-German Collection of Microorganisms and Cell Cultures GmbH ² Junior Research Group Plastic Biodegradation, Dept of Biotechnology and Enzyme Catalysis, Institute of Biochemistry, University of Greifswald
	FLASH ORAL PRESENTATIONS:
ID 120	THE EFFECT OF PVC MICROPLASTICS ON REACTIVE OXYGEN SPECIES GENERATION IN A RAINBOW TROUT CELL LINE <u>Jana Boháčková</u> ^{1,2} , T. Cajthaml ^{1,2} ¹ Institute for Environmental Studies, Faculty of Science, Charles University, Czech Republic ² Institute of Microbiology of the Czech Academy of Sciences, Czech Republic
ID 168	A NOVEL VOLTAMMETRIC NANOSENSOR FOR THE DETECTION OF MICROPLASTICS IN AQUEOUS SAMPLES <u>Gregor Marolt</u> , U. Rozman and G. Kalčikova University of Ljubljana, Faculty of Chemistry and Chemical Technology, Ljubljana, Slovenia
ID 182	IMPROVING THE THERMAL STABILITY OF A MARINE PETASE WITH TARGETED EVOLUTION <u>Jana Brickem</u> ^{1,2} and B. Öztürk ² ¹ Faculty of Life Sciences, Technische Universität Braunschweig, Germany ² Junior Research Group Microbial Biotechnology, Leibniz Institute DSMZ-German Collection of Microorganisms and Cell Cultures, Braunschweig, Germany
11:15 - 13:30	SESSION - 5B: Remediation of sites with Chlorinated Hydrocarbons – ROOM B Chairpersons: Marco Petrangeli Papini and Ioannis Ignatiadis
ID 173	A COUPLED ADSORPTION-BIODEGRADATION (CAB) PROCESS EMPLOYING A POLYHYDROXY BUTYRATE (PHB)-BIOCHAR REACTOR FOR TRICHLORO-ETHYLENE CONTAMINATED GROUNDWATER BIOREMEDIATION M. M. Rossi ¹ ; L. Lorini ² ; M. Mariorenzi ² ; R. Garcia Cervilla ³ ; B. Matturro ⁴ ; S. Rossetti ⁴ and <u>Marco Petrangeli Papini</u> ¹ ¹ Dept of Environmental & Health, Ramboll Italy, Rome, Italy ² Dept of Chemistry, Sapienza University, Rome, Italy ³ Dept of Chemical and Materials Engineering, Universidad Complutense Madrid, Madrid, Spain ⁴ Water Research Institute, IRSA-CNR, Monterotondo, Rome, Italy
ID 23	FULL-SCALE APPLICATION IN ITALY OF A COMBINED ISCR AND ERD TECHNOLOGY FOR THE TREATMENT OF AN AQUIFER IMPACTED WITH TETRACHLOROMETHANE AND CHLOROFORM <u>Alberto Leombruni</u> , Michael Mueller Evonik Active Oxygens, LLC, United States
ID 69	STIMULATION AND INHIBITION OF ANAEROBIC MICROBIAL DECHLORINATION BY DIFFERENT ZVI PARTICLES AND AQUIFER MATERIAL <u>Thomas G. Reichenauer</u> ¹ , S. Spindler ¹ , S. Primisser ¹ , R. Patek ² ¹ AIT Austrian Institute of Technology GmbH, Bioresources, Austria ² TERRA Umwelttechnik GmbH, Austria
ID 91	IN FIELD ACTIVITIES OF CHLORINATED ETHENE BIODEGRADATION: SPATIAL EVOLUTION OF THE CONTAMINATED PLUME MICROBIAL COMMUNITY AFTER BIOSTIMULATION <u>Martina Bertolini</u> , S. Zecchin and L. Cavalca Dip di Scienze per gli Alimenti, la Nutrizione e l'Ambiente (DeFENS), Università degli Studi di Milano, Italy
ID 60	MECHANISM AND KINETICS OF REDUCTIVE DECHLORINATION OF HEXACHLORO-BUTADIENE AND HEXACHLOROETHANE BY BIMETALLIC Pd/Fe MICROPARTICLES USING AN INDIRECT AND CONTINUOUS MONITORING OF IRON CORROSION R. Rodrigues ^{1,2*} , S. Betelu ¹ , S. Colombano ² , T. Tzedakis ² and <u>Ioannis Ignatiadis</u> ¹ ¹ BRGM, French Geological Survey, Orléans Cedex 2, France ² LGC, University Paul Sabatier of Toulouse UT3, Toulouse Cedex 9, France
ID 122	1,2-DICHLOROETHANE CONTAMINATED AQUIFER: MICROBIAL COMMUNITY RESPONSE TO BIOSTIMULATION IN MICROCOSM I. Cruciata ¹ , L. Scirè Calabrisotto ¹ , E.M. Petta ¹ , D. Marino ¹ , G. Carpani ² , A. Pace ¹ and <u>Paola Quatrini</u> ¹

	¹ Dept of Biological, Chemical and Pharmaceutical Sciences and Technologies (STEBICEF), Univ. of Palermo, Palermo, Italy ² Environmental and Biological Laboratories (EPLAB-TEAMB), Eni S.p.A., 20097 S. Donato Milanese, Italy
ID 123	AEROBIC 1,2-DICHLOROETHANE DEGRADERS IN CONTAMINATED GROUNDWATER <u>Laura Scirè Calabrisotto¹, I. Cruciata¹, M. Auteri¹, A. Pace¹, G. Carpani² and P. Quatrini¹</u> ¹ Dept of Biological, Chemical and Pharmaceutical Sciences and Technologies (STEBICEF), Univ. of Palermo, Palermo, Italy ² Environmental and Biological Laboratories (EPLAB-TEAMB), Eni S.p.A., 20097 S. Donato Milanese, Italy
ID 142	QUANTIFICATION OF THE EFFICIENCY OF FREE PRODUCT RECOVERY OF HEAVY CHLORINATED COMPOUNDS USING CHEMICAL AND THERMAL ENHANCEMENTS WITH PERMITTIVITY, RESISTIVITY AND OPTICAL DENSITY MEASUREMENTS S. Colombano¹, H. Davarzani¹, E.D. van Hullebusch^{2,3}, D. Huguenot², D. Guyonnet¹, J. Deparis¹, F. Lion¹, <u>Ioannis Ignatiadis¹</u> ¹ BRGM, French Geological Survey, Water, Environment, Process Development and Analysis Division, Orléans cedex 2, France ² Université Université Gustave Eiffel, Laboratoire Géomatériaux et Environnement (LGE), EA4508, UPEM, Marne-la-Vallée, France ³ Institut de Physique du Globe de Paris, Université Paris Cité, UMR 7154, CNRS, Paris, France
	FLASH ORAL PRESENTATIONS:
ID 117	NANOBIOREMEDIATION OF HEXACHLOROCYCLOHEXANES <u>Jaroslav Semerád^{1,2}, Ondřej Lhotský^{2,3}, and Tomáš Cajthaml²</u> ¹ Institute of Microbiology of the Czech Academy of Sciences, Prague, Czech Republic ² Institute for Environmental Studies, Faculty of Science, Charles University, Prague, Czech Republic ³ Dekonta As, Dřetovice 109, Stehelčevy, Czech Republic
13:15 - 14:30	LUNCH (Minoa Palace Hotel)

14:30 - 17:00	FREE TIME
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17:00 - 18:30	SESSION - 6A: H2020-TERMINUS Conference (ROOM A) Chairpersons: Vincent Verney and Patrick Shahgaldian
ID 43	ENZYMATIC DEGRADATION OF THE MOST COMMON ALIPHATIC BIO-POLYESTERS A. Rosato, A. Romano, G. Totaro, A. Celli, F. Fava, L. Sisti, <u>Giulio Zanaroli</u> Dept. of Civil, Chemical, Environmental and Materials Engineering – DICAM, University of Bologna, Italy
ID 105	RECYCLING OF NON-FIBRE FRACTION OF CARTON PACKAGES <u>Åsa Olsson</u> Tetra Pak Packaging Solutions AB, Lund, Sweden
ID 111	THE POWER OF NADES - BOOSTING ENZYME STABILITY TOWARDS THERMAL DEGRADATION <u>Simona Varriale¹, Astrid E. Delorme², Jean-Michel Andanson², Julien Devemy², Patrice Malfreyt², Vincent Verney², and Cinzia Pezzella^{1,3}</u> ¹ Biopox srl, Viale Maria Bakunin 12, Naples, 80125, Italy ² Université Clermont Auvergne, CNRS, SIGMA Clermont, ICCF, F-63000 Clermont-Ferrand, France ³ Department of Agricultural Sciences, University of Naples “Federico II”, Naples, Italy
ID 119	ADDITIVE EFFECTS ON CURING ESTER-BASED DEGRADABLE POLYURETHANE ADHESIVES S. Mačiulytė, P. Nemanitė, D. Bražinskienė, O. Eicher-Lorka, <u>S. Joseph Asadauskas</u> Dept. of Chemical Eng. and Technologies, Center for Physical Sciences and Technology (FTMC), Lithuania

ID 135	COMPLEXITY OF MULTILAYERS, MAIN CHALLENGES AND SOLUTIONS TO REACH THE REALITY OF A SUSTAINABLE INDUSTRIAL PROCESSES, AN SMES POINT OF VIEW <u>Alexandre Fontaine</u> STTP Emballage, Sainte-Sigolène, France
ID 137	RHEOLOGICAL IMPLICATIONS OF FUNCTIONAL NANOCHARGES IN POLYURETHANE-BASED ADHESIVES AND THEIR LAMINATION PROCESS M. Ngom, C. Chevalier, S. Mani, <u>Rigoberto Ibarra-Gómez</u> Centre Industriel de la Plasturgie et des Composites (IPC), France
ID 144	NANOBIOCATALYTIC DEGRADATION OF DESIGNER POLYURETHANES <u>Patrick Shahgaldian</u> ¹ , S. Amirabbas Nazemi ¹ , C. Wu ¹ , R. Burn ² , C. Pezzella ^{3,4} , S. Varriale ^{3,4} and P. F.-X. Corvini ² ¹ Institute of Chemistry and Bioanalytics, School of Life Sciences, FHNW, Switzerland ² Institute of Ecopreneurship, School of Life Sciences, FHNW, Switzerland ³ Biopox, Naples, Italy ⁴ Dept of Agricultural Sciences, University of Naples “Federico II”, Portici, Italy
17:00 - 18:30	SESSION – 6B: Phytoremediation of heavy metals - I (ROOM B) Chairpersons: Michel Mench and Eleni Papazoglou
ID 28	PHYTOMANAGEMENT OF METAL(LOID)-CONTAMINATED SOILS: ORGANIC AMENDMENTS AND SI/SE BIOFORTIFICATION TO PROMOTE BIOMASS PRODUCTION AND SOIL REMEDIATION <u>Michel Mench</u> ¹ , J. Bobrikova ¹ , E. Clément ¹ , L. Marchand ² , N. Oustrière ³ , E. Paidjan ¹ , S. Beaujean ¹ , B. Rutkowska ⁴ , R. Segura ¹ , W. Szulc ⁴ , Y. Token ¹ ¹ INRAE, BIOGECO, University of Bordeaux, Pessac, France ² Suez, LyRE, Pessac, France ³ Junia – Yncrea, Lille, France ⁴ Warsaw University of Life Sciences, Warsaw, Poland
ID 171	BIOAUGMENTED PHYTOEXTRACTION OF COPPER WITH THE USE OF BIOSTIMULANT AND PLANT GROWTH PROMOTHING RHIZOBACTERIA <u>Gabriele Bellotti</u> ¹ , F. Andrea ² , F. Capra ² , M.C. Guerrieri ¹ , E. Taskin ¹ , G. Antonio ³ , F. Ghilardelli ³ , F. Bandini ¹ , C. Misci ¹ , F. Vaccari ¹ , M. Manica ⁴ , P. Vida ⁴ , G. De Maio ⁵ , P.S. Cocconcelli ¹ , E. Puglisi ¹ ¹ Dept for Sustainable Food Process (DiSTAS), Faculty of Agriculture, Food and Environmental Sciences, Università Cattolica del Sacro Cuore, Piacenza, Italy ² Dept of Sustainable Crop Production (DI.PRO.VE.S.), Faculty of Agriculture, Food and Environmental Sciences, Università Cattolica del Sacro Cuore, Piacenza, Italy ³ Dept of Animal Science, Food and Nutrition (DIANA), Faculty of Agriculture, Food and Environmental Sciences, Università Cattolica del Sacro Cuore, Piacenza, Italy ⁴ Manica S.p.a. Via Adige, 4, 38068 Rovereto TN. ⁵ Natural Technologies Italia S.r.l., Casalmaggiore (CR), Italy.
ID 13	ELECTROKINETIC ASSISTED (AC AND DC) PHYTOREMEDIATION OF HIGHLY POLLUTED MULTI-METAL MINE TAILINGS USING <i>LOLIUM PERENNE</i> <u>Hassay Lizeth Medina-Díaz</u> ¹ , F.J. López-Bellido ¹ , J. Alonso-Azcárate ² , F.J. Fernández-Morales ¹ , J. Villaseñor ¹ , L. Rodríguez ¹ ¹ Dept. of Chemical Engineering, University of Castilla-La Mancha, Ciudad Real, Spain ² Dept. of Physical Chemistry, University of Castilla-La Mancha, Toledo, Spain
ID 110	ADVANCED PHYTOREMEDIATION STRATEGIES FOR ARSENIC CONTAMINATED GROUNDWATER D. Marzi ¹ , M.L. Antenzio ¹ , S. Vernazzaro ¹ , C. Sette ² , E. Veschetti ² , L. Lucentini ² , G. Daniele ³ , <u>Patrizia Brunetti</u> ¹ and M. Cardarelli ¹ ¹ IBPM-CNR, c/o Dipartimento di Biologia e Biotechnologie, Sapienza Università di Roma, Roma, Italy ² Water Quality and Health Unit, Dept Environmental and Health, Italian Nat. Inst. of Health, Roma, Italy ³ Egato1-Vt Ente di Governo Dell'A.T.O. N°1 Lazio Nord—Viterbo c/o Provincia di, Viterbo, Italy
ID 151	ARSENIC ACCUMULATION AND DISTRIBUTION IN <i>PTERIS VITTATA</i> PLANTLETS AND DYNAMICS OF ARSENIC-RELATED GENE EXPRESSION M.L. Antenzio ¹ , G. Capobianco ² , S. Serranti ² , G. Bonifazi ² , P. Brunetti ¹ and <u>Maura Cardarelli</u> ¹ ¹ IBPM-CNR, c/o Dipartimento di Biologia e Biotechnologie, Sapienza Università di Roma, Roma, Italy ² Dipartimento di Ingegneria Chimica Materiali Ambiente, La Sapienza - Università di Roma, Rome, Italy
	FLASH ORAL PRESENTATIONS:
ID 48	EFFECT OF MULTICONTAMINATED SOIL ON WATER RELATIONS OF <i>PTERIS CRETICA</i>

	<u>Marie Lhotska</u>¹, V. Zemanova², F. Hnilička¹ and D. Pavlikova² ¹ Dept of Botany and Plant Physiology, Faculty of Agrobiology, Food and Natural Resources, Czech University of Life Sciences Prague, Czech Republic ² Dept of Agroenvironmental Chemistry and Plant Nutrition, Faculty of Agrobiology, Food and Natural Resources, Czech University of Life Sciences Prague, Czech Republic
18:30 - 19:00	Coffee break & Poster Viewing
19:00 - 19:45	SESSION – 7A-I: Toxicity & Risk – ROOM B Chairpersons: Danae Venieri and Anna Wyrwicka-Drewniak
ID 30	BISMUTH EXPOSURE IN PLANTS: AN ECOTOXICOLOGICAL AND GENOTOXIC STUDY IN A MULTI- SCALE EXPERIMENTAL APPROACH F. Pietrini¹, L. Passatore¹, S. Carloni¹, L. Massimi², C. Giusto^{1,2}, V. Iannilli³ and <u>Massimo Zacchini</u>¹ ¹ Istituto di Ricerca sugli Ecosistemi Terrestri, Consiglio Nazionale delle Ricerche (CNR), Rome, Italy ² Dept of Environmental Biology, Sapienza University of Rome, Rome, Italy ³ ENEA, Agenzia nazionale per le nuove tecnologie, l'energia e lo sviluppo economico sostenibile, Dip. Sostenibilità dei Sistemi Produttivi e Territoriali, Rome, Italy
ID 97	WASTEWATER TREATMENT DURING COVID-19 PANDEMIC. DEFINING REAL WASTEWATER RISKS P. Kokkinos¹, D. Venieri² and <u>Dionissios Mantzavinos</u>¹ ¹ Dept of Chemical Engineering, University of Patras, University Campus, Patras, Greece ² School of Chemical & Environmental Engineering, Technical University of Crete, Chania, Greece
	FLASH ORAL PRESENTATIONS:
ID 56	ARSENIC POLLUTION AND HUMAN HEALTH RISK ASSESSMENT IN THE REGION OF RACHA-LECHKHUMI AND KVEMO SVANETI OF GEORGIA V. Tebidze¹, <u>Elene Zurabishvili</u>¹, G. Tatanashvili¹, T. Varazi¹, E. Bunin² and E. Bakradze³ ¹ East European University, Tbilisi, Georgia ² Dept of Immunology, Microbiology and Parasitology, Univ. of the Basque Country, Leioa, Spain ³ LEPL Environmental Pollution Monitoring Dept, The National Environmental Agency, Tbilisi, Georgia
ID 147	EFFECT OF SELECTED <i>TRICHODERMA</i> STRAINS ON WHEAT SEEDLINGS GROWN IN CADMIUM-CONTAMINATED SOIL <u>Patrycja Kopa</u>¹, M. Szczech², A. Witusińska¹, A. Wyrwicka-Drewniak¹ and E. Gajewska¹ ¹ Dept of Plant Physiology and Biochemistry, University of Lodz, Poland ² Dept of Microbiology and Rhizosphere, Institute of Horticulture - NRI, Skierniewice, Poland
ID 174	PERFORMANCE OF THREE BIOMIMETIC STATIONARY PHASES FOR THE PREDICTION OF AQUATIC TOXICITY OF PHARMACEUTICALS C. Stergiopoulos, L.-A. Tsakanika, E. Notari, F. Katsaras, M. Ochsenkühn-Petropoulou and <u>Fotios Tsopelas</u> School of Chemical Engineering, National Technical University of Athens, Greece
ID 58	EFFECT OF STUDENT ATTENDANCE ON AIRBORNE MICROBIAL CHARACTERISTICS IN EDUCATIONAL FACILITIES V. Bofili, L. Raisi and <u>Eleftheria Katsivela</u> Department of Electronic Engineering, Hellenic Mediterranean University, Chania, Greece
19:45 - 20:30	SESSION -7A-II: Wastewater treatment – ROOM B Chairpersons: Jungbae Kim & Danae Venieri
ID 03	BIOPURIFICATION SYSTEMS: RECENT ADVANCES ON PESTICIDE REMOVAL AND ALTERNATIVE APPLICATIONS <u>Carlos E. Rodríguez-Rodríguez</u>, M. Masís-Mora, M. Pérez-Villanueva, A. Huete-Soto, and A. Acosta-Sánchez Research Center of Environmental Contamination (CICA), Universidad de Costa Rica, Costa Rica
ID 76	ANTIFOULING MEMBRANES FOR BIOLOGICAL WASTEWATER TREATMENT BASED ON 2D PLANAR NANOBIOCATALYST OF CROSSLINKED GLUCOSE OXIDASE AGGREGATES WRAPPING EXTRA-LARGE GRAPHENE OXIDE <u>Jungbae Kim</u>¹, Testaverde S. Kim¹, Jahyun Nam¹, Kyung-Min Yeon² ¹ Department of Chemical and Biological Engineering, Korea University, Republic of Korea ² Samsung C&T Corporation, Republic of Korea

ID 167	ABATEMENT OF MICRO-POLLUTANTS AND DISINFECTION IN WATERCOURSES: THE INTRIGUING ROLE OF THE WATER MATRIX A. Kyriazi¹, I. Gounaki¹, <u>Dionissios Mantzavinos²</u> and D. Venieri¹ ¹ School of Chemical & Environmental Engineering, Technical University of Crete, Greece ² Department of Chemical Engineering, University of Patras, Greece
FLASH ORAL PRESENTATIONS:	
ID 175	TREATMENT OF HOSPITAL WASTEWATER: EMPHASIS ON ECOTOXICITY AND ANTIBIOTIC RESISTANCE GENES <u>Andreas Kaliakatsos¹</u>, Th. Manios², A.S. Stasinakis³, N. Katsarakis⁴, M. Fountoulakis³, S. Dokianakis⁴, N. Kalogerakis¹, I. Gounaki¹, D. Venieri¹ ¹ School of Chemical & Environmental Engineering, Technical University of Crete, Chania, Greece. ² Department of Agriculture, Hellenic Mediterranean University, Heraklion, Greece. ³ Department of Environment, University of the Aegean, Mytilene, Greece. ⁴ Center of Materials Technology and Photonics, Hellenic Mediterranean University, Heraklion, Greece
19:00 - 20:00	SESSION -7B-I: Phytoremediation of heavy metals - II – ROOM A Chairpersons: Thomas Reichenauer & Grzegorz Siebielec
ID 113	TOLERANCE CAPACITY OF SELECTED MACROPHYTES AGAINST MULTIMETAL CONTAMINATED GROUNDWATER <u>Aqib Hassan Ali Khan¹</u>, B. Velasco Arroyo¹, C. Rad², S. Curiel-Alegre^{1,2}, A. Martínez², S. Martel¹, and R. Barros¹ ¹ International Research Center in Critical Raw Materials for Advanced Industrial Technologies (ICCRAM). University of Burgos, Burgos, Spain. ² Research Group in Composting (UBUCOMP). University of Burgos, Faculty of Sciences, Burgos Spain.
ID 63	CHARACTERISATION OF BULGARIAN SERPENTINE SOILS AND Ni ACCUMULATION BY <i>ODONTARRHENA CHALCIDICA</i> <u>Violina Angelova</u> Agricultural University of Plovdiv, Bulgaria
ID 176	RARE EARTH ELEMENTS IN THE ENVIRONMENT AND WASTE AND POTENTIAL FOR THEIR PHYTOMINING <u>Grzegorz Siebielec¹</u> , S. Siebielec ² , D. Gmur ¹ ¹ Dept. of Soil Science Erosion & Land Protection, Inst. of Soil Science and Plant Cultivation, Pulawy, Poland ² Dept. of Agricultural Microbiology, Institute of Soil Science and Plant Cultivation, Pulawy, Poland
FLASH ORAL PRESENTATIONS:	
ID 52	OPTIMIZING PHYTOMANAGEMENT STRATEGIES FOR A METAL (Cd, Pb, Zn, and Cu)-CONTAMINATED SOIL TO PROVIDE BIOMASS FOR CLEAN BIOFUEL PRODUCTION – PROGRESS FROM POT TRIAL Ofori-Agyemang Felix¹, Waterlot Christophe¹, <u>Michel Mench²</u>, Oustrière Nadège¹ ¹ Univ. Lille, Institut Mines-Télécom, Univ. Artois, JUNIA, Laboratoire de Génie Civil et géo-Environnement, Lille, France ² Univ. Bordeaux, INRAE, UMR BIOGECO INRAE, F-33615 Pessac cedex, France
ID 64	EXTRACTION OF AMMONIUM NICKEL SULFATE HEXAHYDRATE BY HYDROMETALLURGICAL PROCESS FROM THE HYPERACCUMULATING PLANT ODONTARRHENA CHALCIDICA – CASE STUDY FROM BULGARIA <u>Violina Angelova</u> Agricultural University of Plovdiv, Bulgaria
ID 33	CHANGE OF SOIL ENZYME ACTIVITY IN RESPONSE TO ARSENIC TOXICITY: HYPERACCUMULATOR VS. NON-HYPERACCUMULATOR <u>Veronika Zemanová¹</u> , D. Pavlíková ¹ and M. Pavlík ² ¹ Dept. of Agro-Environmental Chemistry and Plant Nutrition, Czech University of Life Sciences Prague, Czechia ² Isotope Laboratory, Institute of Experimental Botany of the Czech Academy of Sciences, Czechia
20:00 - 20:30	SESSION -7B-II: Bioremediation of contaminated sites - II (ROOM A) Chairpersons: Andreas Loibner & Tibor Benedek
ID 40	ANTHRAQUINONE REMOVAL FROM PAH-CONTAMINATED SOILS REQUIRES BACTERIAL SPECIFIC POPULATIONS AND MECHANISMS S.N. Jiménez-Volkerink¹, <u>Maria Jordán¹</u>, C. Minguillón², S. Shetty³, H. Smidt³ J. Vila¹ and M. Grifoll¹

	¹ Dept. of Genetics, Microbiology and Statistics, Faculty of Biology, University of Barcelona, Spain. ² Dept. of Pharmacology and Therapeutic Chemistry, University of Barcelona, Barcelona, Spain ³ Laboratory of Microbiology, Wageningen University & Research, Wageningen, The Netherlands
	FLASH ORAL PRESENTATIONS:
ID 39	BACTERIAL BENZO(a)ANTHRACENE DEGRADATION PROCESSES IN SOIL ARE INFLUENCED BY OTHER HMW-PAHS AS CO-SUBSTRATES <u>Maria Jordán</u> , S.N. Jiménez-Volkerink, P. Martín, M. Grifoll and J. Vila Dept. of Genetics, Microbiology and Statistics, Faculty of Biology, University of Barcelona, Spain.
ID 185	STUDY OF PHENANTHRENE MINERALIZATION IN SOILS ASSISTED BY BIOAUGMENTATION, BIOSTIMULATION AND CYCLODEXTRIN Alba Lara-Moreno ^{1,2} , Esmeralda Morillo ¹ , Jaime Villaverde ¹ ¹ Dept of Agrochemistry, Environmental Microbiology and Soil Conservation, Institute of Natural Resources and Agrobiology of Seville, (IRNAS) CSIC, Seville, Spain ² Dept of Microbiology and Parasitology, Faculty of Pharmacy, University of Seville, Seville, Spain

WEDNESDAY, JUNE 15 TH , 2022	
8:30- 10:30	SESSION – 8A: Valorization – I (ROOM A) Chairpersons: Roberto De Philippis and M. Angeles De La Rubia
ID 195 Keynote	BIORECOVERY OF HEAVY METALS FROM WASTE WATERS AND THEIR VALORIZATION AS BIOCATALYSTS Roberto De Philippis¹, A. Adessi¹, L. Cavalca², S. Zecchin², S. Mazzini², G. Borgonovo², I. Rimoldi³, R. Gandolfi³ ¹ Dept of Agriculture, Food, Environment and Forestry (DAGRI) University of Florence, Italy ² Dept. of Food, Environmental and Nutritional Sciences (DeFENS), University of Milan, Italy ³ Dept. of Pharmaceutical Sciences (DISFARM), University of Milan, Italy
ID 67	COLLECTION, SELECTION AND UPSCALING OF NATURAL CYANOBACTERIA MICROBIOMES FOR POLYHYDROXYALKANOATES AND EXOPOLYSACCHARIDES PRODUCTION B. Altamira-Algarra, E. González-Flo and Joan García GEMMA-Group of Environmental Engineering and Microbiology, Dept of Civil and Environmental Engineering, Universitat Politècnica de Catalunya-BarcelonaTech, Barcelona, Spain.
ID 19	VALORIZATION OF CHEESE WHEY WASTEWATERS BY <i>CHLORELLA SP.</i> AND PRODUCTION OF HIGH-NUTRITIONAL VALUE BIOMASS Theocharis Nazos¹, N.- C. Stratigakis¹, N. Barka¹, A. Lagouvardou-Spantidaki², M. Spantidaki² and D. Ghanotakis¹ ¹ Department of Chemistry, University of Crete, Heraklion, Greece ² Chemicotechniki Laboratories, Rethymno, Crete, Greece
ID 46	RECOVERY OF SPOIL MATERIAL TREATED WITH LIME APPLYING ORGANIC AMENDMENTS AND M. SATIVA G. Luigi Garbini^{1,2}, Anna Barra Caracciolo¹, L. Rolando¹, A. Visca¹, V. Terenzi¹, A. Finizio³, V. Mazzurco-Miritana⁴, I. Nogues⁴, P. Grenni¹ ¹ Water Research Institute, National Research Council (IRSA-CNR), Montelibretti, Rome, Italy ² Dept of Ecology and Biological Sciences, Tuscia University, Viterbo, Italy ³ Dept of Earth and Environmental Sciences, University of Milano-Bicocca, Milano, Italy ⁴ Research Institute on Terrestrial Ecosystems, National Research Council (IRET-CNR), Rome, Italy
ID 65	CONVERSION OF TEXTILE WASTE INTO BIOETHANOL: STATISTICAL OPTIMIZATION OF THE FERMENTATION PROCESS IN BIOREACTOR Ahmed Mansy¹, T. Taha², M. Abu-Saied³, H. El-Gendi⁴, E. El Desouky⁵, R. Amer² ¹ Environment and Natural Materials Research Institute (ENMRI), SRTA-CITY, Alexandria, Egypt. ² Genetic Engineering and Biotechnology Research Institute (GEBRI), SRTA-CITY, Alexandria, Egypt. ³ Advanced Technology and New Materials Research Institute, SRTA-CITY, Alexandria, Egypt. ⁴ Genetic Engineering and Biotechnology Research Institute (GEBRI), SRTA-CITY, Alexandria, Egypt. ⁵ Chemistry department, Faculty of science, Alexandria University, Egypt.
FLASH ORAL PRESENTATIONS:	
ID 07	INTEGRAL VALORIZATION OF AGRICULTURAL WASTE BY HYDROTHERMAL CO-CARBONIZATION R.P. Ipiales^{1,2}, E. Diaz¹, E. Diaz-Portuondo², A.F. Mohedano¹, M.A. de la Rubia¹ ¹ Chemical Engineering Department, Universidad Autónoma de Madrid, Madrid, Spain ² Arquimea-Agrotech, 28400 Collado Villalba – Madrid, Spain
ID 198	TOWARDS THE DEVELOPMENT OF SAFE AND SUSTAINABLE BY DESIGN CHEMICALS, MATERIALS AND PRODUCTS D.A. Sarigiannis^{1,2,3}, Antonios Gypakis⁴, S. Karakitsios^{1,2} ¹ Aristotle University of Thessaloniki, Dept of Chemical Eng., Env. Eng. Lab., Thessaloniki, Greece ² HERACLES Research Center on the Exposome and Health, Aristotle Univ. of Thessaloniki, Greece ³ School for Advanced Study (IUSS), Science, Technology and Society Department, Pavia, Italy ⁴ Ministry of Development, General Secretariat for Research and Innovation, Athens, Greece
ID 09	IMPROVEMENT OF HYDROCHAR PROPERTIES BY ACID-ASSISTED HYDROTHERMAL CARBONIZATION Angel F. Mohedano, A. Sarrion, R.P. Ipiales, M.A. de la Rubia, E. Diaz Dept of Chemical Engineering, Faculty of Science, Universidad Autonoma de Madrid, Madrid, Spain
08:30 - 10:30	SESSION – 8B: Sites Contaminated with Recalcitrant Chemical Compounds – (ROOM B)

Chairpersons: Hermann J. Heipieper & Christian Eberlein	
ID 15	PERSPECTIVES OF MICROBIAL DEGRADATION AND RECYCLING OF PLASTICS <u>Hermann J. Heipieper</u> , O. Puiggene, M.J. Cardenas Espinosa, and C. Eberlein Dept of Environmental Biotechnology, Helmholtz Centre for Environmental Research - UFZ, Leipzig, Germany
ID 16	TOWARDS BIORECYCLING OF POLYURETHANES: STRATEGIES OF PSEUDOMONAS CAPEFERRUM TDA1 FOR EXTRA- AND INTRACELLULAR DEGRADATION <u>Christian Eberlein</u> , O. Puiggene, M.J. Cardenas Espinosa, and H.J. Heipieper Dept of Environmental Biotechnology, Helmholtz Centre for Environmental Research - UFZ, Leipzig, Germany
ID 12	REVEALING MICROAEROBIC DEGRADATION OF XYLENE AT A DECADE-OLD CONTAMINATED SITE: A MULTI-OMICS APPROACH <u>András Táncics</u> ¹ , S. Banerjee ¹ , A. Rodrigues Soares ² , A.J. Probst ² , B. Kriszt ³ ¹ Dept of Molecular Ecology, Hungarian Univ. of Agriculture and Life Sciences, Gödöllő, Hungary ² Inst. for Environmental Microbiology and Biotechnology, Univ. of Duisburg-Essen, Essen, Germany ³ Dept of Environmental Safety, Hungarian Univ. of Agriculture and Life Sciences, Gödöllő, Hungary
ID 72	ENZYME-BASED DEGRADATION OF HIGHLY PERSISTENT PETROLEUM HYDROCARBONS <u>Andreas P. Loibner</u> ¹ , M. Sumetzberger-Hasinger ¹ , J. Otte ¹ , E. Edlinger ¹ , T. Diefenbach ¹ , V. Braunschmid ¹ , K. Müllern ¹ , M. Lackner ² , K. Putz ³ , M. Plank ⁴ , N. Rüttinger ⁵ , H. J. Heipieper ⁶ , G. Gübitz ¹ , and D. Ribitsch ^{1,7} ¹ Institute of Environmental Biotech., Univ. of Natural Resources and Life Sciences (BOKU), Tulln, Austria ² University of Applied Sciences Technikum Wien, Hoechsttaedtplatz 6, 1200 Vienna, Austria ³ Ensowa - innovation und umweltconsulting GmbH, Dr. Karl Putz Weg 1, 8244 Schäftern ⁴ Spintec, Vorau, Austria ⁵ BCA Vertriebsges.m.b.H., Leobersdorf, Austria ⁶ Dept of Environ. Biotech., Helmholtz Centre for Environmental Research - UFZ, Leipzig, Germany ⁷ Austrian Centre for Industrial Biotechnology (ACIB), Tulln, Austria
ID 25	A COMBINED OMICS APPROACH REVEALS THE ROLE OF A <i>NOCARDIOIDES</i> BACTERIUM IN IBUPROFEN AND CARBAMAZEPINE DEGRADATION <u>Márton Pápai</u> ¹ , Gergely Maróti ² , Roland Wirth ² , Ofir Menashe ^{3,4} , Hussein Daood ⁵ , Táncics András ¹ , Balázs Kriszt ⁶ , <u>Tibor Benedek</u> ¹ ¹ Dept of Molecular Ecology, Hungarian Univ. of Agriculture and Life Sciences, Gödöllő, Hungary ² Institute of Plant Biology, Biological Research Center, ELKH, Szeged, Hungary ³ Water Industry Eng. Dept, Kinneret Academic College on the Sea of Galilee, D.N. Emek Ha'Yarden, Israel ⁴ BioCastle Water Technologies Ltd., Edison Park, Israel ⁵ Inst. of Horticultural Sciences, Hungarian Univ. of Agriculture and Life Sciences, Gödöllő, Hungary ⁶ Dept of Environmental Safety, Hungarian Univ. of Agriculture and Life Sciences, Gödöllő, Hungary
ID 74	MICROBIAL DEGRADATION OF HYDROCARBONS - BASIC PRINCIPLES FOR BIOREMEDIATION <u>Ł. Ławniczak</u> ¹ , M. Woźniak-Karczewska ¹ , A. P. Loibner ² , H. J. Heipieper ³ and <u>Lukasz Chrzanowski</u> ¹ ¹ Institute of Chemical Technology and Engineering, Poznan University of Technology, Poland ² Inst. of Environmental Biotechnology, BOKU—Univ. of Natural Resources and Life Sciences, Austria ³ Dept of Environmental Biotechnology, Helmholtz Centre for Environmental Research—UFZ, Germany
ID 75	IONIC LIQUIDS AS A POTENTIAL RECALCITRANT POLLUTANTS - DEEPER INSIGHT INTO THEIR SORPTION, MOBILITY AND TOXICITY <u>Marta Woźniak-Karczewska</u> ¹ , A. Parus ¹ , M. Niemczak ¹ and Ł. Chrzanowski ¹ ¹ Faculty of Chemical Technology, Poznan University of Technology, Poznan, Poland
FLASH ORAL PRESENTATIONS:	
ID 155	EFFECT OF QUATERNARY AMMONIUM CATIONS ON GLYPHOSATE SORPTION, MOBILITY AND TOXICITY IN HERBICIDAL IONIC LIQUIDS Anna Parus ¹ , Marta Woźniak-Karczewska ¹ , Michal Niemczak ¹ and <u>Lukasz Chrzanowski</u> ¹ ¹ Faculty of Chemical Technology, Poznan University of Technology, Poznan, Poland
ID 37	MICROAEROBIC ENRICHMENT AND DESCRIPTION OF BENZENE DEGRADING BACTERIA <u>Anna Bedics</u> ¹ , Sinchan Banerjee ¹ , Márton Pápai ¹ , Tibor Benedek ¹ , Péter Harkai ² , Balázs Kriszt ² , András Táncics ¹ ¹ Dept of Molecular Ecology, Hungarian Univ. of Agriculture and Life Sciences, Gödöllő, Hungary ² Dept of Environmental Safety, Hungarian Univ. of Agriculture and Life Sciences, Gödöllő, Hungary

10:30 - 11:00	Coffee break & Poster Viewing
11:00 - 12:30	SESSION – 9A: VALORIZATION – II – ROOM A Chairpersons: Joan Garcia & Antonios Gypakis
ID 86	GRAPE POMACE VALORIZATION VIA THE PRODUCTION OF HEXANOIC ACID, FUEL ADDITIVES, PHAS, AND BIOMETHANE G. A. Martinez¹, J. M. B. Domingos¹, E. Morselli¹, <u>Emma Jones¹</u>, C. Gioia¹, P. Marchese¹, A. M. Raspolli Galletti², A. Celli¹, F. Fava¹ and L. Bertin¹ ¹ Dept of Civil, Chemical, Environmental and Materials Engineering (DICAM), University of Bologna, Italy ² Dept of Chemistry and Industrial Chemistry, University of Pisa, Pisa, Italy
ID 98	FROM CO₂ TO PHA: EXPLORING ANOXYGENIC PHOTOSYNTHETIC BACTERIA <u>André Freches^{1,2}</u>, G. Farnocchia^{1,2}, J. Almeida^{1,2}, J. Fradinho^{1,2}, M. Reis^{1,2} ¹ Associate Laboratory i4HB - Institute for Health and Bioeconomy, NOVA School of Science and Technology, Universidade NOVA de Lisboa, Caparica, Portugal ² UCIBIO – Applied Molecular Biosciences Unit, Department of Chemistry, NOVA School of Science and Technology, Universidade NOVA de Lisboa, Caparica, Portugal
ID 112	RECYCLING MIXED BIOWASTE INTO VALUABLE CHEMICALS AS MEDIUM-CHAIN CARBOXYLIC ACIDS: THE ROLE OF THERMAL PRETREATMENT B. Tonanzi¹, <u>Agata Gallipoli¹</u>, G. Cecchini², A. Frugis², A. Gianico¹, M. Lazzazzara², V. Piemonte³, M. Valentinetti³, C.M. Braguglia¹ ¹ Water Research Institute, National Research Council of Italy, CNR-IRSA, Monterotondo, Roma, Italy. ² ACEA ELABORI SpA, Via Vitorchiano 165, Rome, Italy. ³ University Campus Bio-medico, Faculty of Engineering, Roma, Italy
ID 109	SUSTAINABLE FOOD WASTE BIOREFINERY: INSIGHTS INTO THE CONVERSION OF ENDOGENOUS LACTATE INTO CAPROATE A. Gianico, A. Gallipoli, G. Gazzola, S. Crognale, <u>Simona Rossetti</u>, B. Tonanzi, C.M. Braguglia Water Research Institute, National Research Council of Italy, CNR-IRSA, Monterotondo, Roma, Italy.
ID 55	PHYSICO-CHEMICAL CHARACTERIZATION OF SAWDUST DERIVED LOW COST BIOCHAR FOR POTENTIAL APPLICATION IN IMMOBILIZATION OF METALLIC CONTAMINATIONS FROM RIVER SEDIMENTS <u>Abhijit Debnath¹</u>, P. Kumar Singh¹ and Y. Chandra Sharma² ¹ Dept of Civil Engineering, Indian Institute of Technology (BHU) Varanasi, India ² Dept of Chemistry, Indian Institute of Technology (BHU) Varanasi, India
FLASH ORAL PRESENTATIONS:	
ID 82	SUPPLY AND APPLICATION OF FIBER CROPS FOR SUSTAINABLE SOIL REMEDIATION AND BIO-BASED RAW MATERIAL PRODUCTION FOR INDUSTRIAL USES – FORTE PROJECT (https://www.forte-project.gr) <u>Eleni G. Papazoglou</u> Agricultural University of Athens, Dept of Crop Science, Athens, Greece.
ID 89	VALORIZATION OF PRIMARY BUOYANT MUNICIPAL WASTEWATER SLUDGE FRACTION THROUGH VOLATILE FATTY ACIDS PRODUCTION <u>Akarsh Swamilingappa Anniah</u>, G. Agustín Martínez, F. Fava, and L. Bertin Dept. of Civil, Chemical, Environmental, and Materials Engineering – DICAM, University of Bologna, Italy
ID 90	PREFERABLE ENZYMATIC HYDROLYSIS OF SOFT TISSUE WASTE INTO FERMENTABLE SUGARS WITH SUBSEQUENT CONVERSION INTO BIOETHANOL <u>Tarek H. Taha¹</u>, A. Mansy², M. Abu-Saied³, H. El-Gendi⁴, E. El Desouky⁵, R. Amer¹ ¹Environmental Biotechnology Dept, Genetic Engineering and Biotechnology Research Institute (GEBRI), City of Scientific Research and Technological Applications (SRTA-CITY), Alexandria, Egypt. ²Environment and Natural Materials Research Institute (ENMRI), City of Scientific Research and Technological Applications, (SRTA-CITY), Alexandria, Egypt. ³Polymer Materials Research Dept, Advanced Technology and New Materials Research Institute, City of Scientific Research and Technological Applications (SRTA-CITY), Alexandria, Egypt. ⁴Bioprocess Development Dept, Genetic Engineering and Biotechnology Research Institute (GEBRI), City of Scientific Research and Technological Applications (SRTA-CITY), Alexandria, Egypt. ⁵Chemistry department, Faculty of science, Alexandria University, Egypt.
11:00 - 12:30	SESSION – 9B: Constructed Wetlands & Phytoremediation of Organics – (ROOM B) Chairpersons: Alexandros Stefanakis & Maranda Esterhuizen

ID 192 Keynote	CONSTRUCTED WETLANDS FOR SUSTAINABLE WASTEWATER MANAGEMENT IN A CIRCULAR ECONOMY: GLOBAL EXPERIENCES AND CASE STUDIES <u>Alexandros Stefanakis</u> School of Chemical & Environmental Engineering, Technical University of Crete, Chania, Greece
ID 26	INFLUENCE OF PLANT ROOT EXUDATES ON ROOT COLONIZATION AND RHIZOREMEDIATION POTENTIAL OF PCB-DEGRADING BACTERIA <u>Elisa Ghitti, E. Rolli and S. Borin</u> Dept of Food, Environmental and Nutritional Sciences (DeFENS), Università degli Studi di Milano, Italy
ID 14	OPTIMIZATION OF THE GREEN LIVER SYSTEM® FOR PHYTOREMEDIATION OF PHARMACEUTICALS IN SURFACE WATERS <u>Maranda Esterhuizen^{1,2,3}, and Stephan Pflugmacher³</u> ¹ University of Helsinki, Ecosystems and Environment Research Programme, Faculty of Biological and Environmental Sciences, and Helsinki Institute of Sustainability Science (HELSUS), Helsinki, Finland ² Env. Safety Group, Korea Institute of Science and Technology (KIST) Europe, Saarbrücken, Germany ³ University of Manitoba, Faculty of Environment, Earth, and Resources, Winnipeg, Canada
ID 35	PHYTOMANAGEMENT OF AGRICULTURAL SOILS HISTORICALLY CONTAMINATED BY DIELDRIN <u>Marie-Cécile Affholder¹, G. Cohen¹, M. Mench²</u> ¹ EPOC - UMR CNRS 5805 – Equipe PROMESS, Université de Bordeaux - Bordeaux INP, Talence, France ² Université de Bordeaux, INRAE, UMR BIOGECO INRAE 1202, Pessac, France
FLASH ORAL PRESENTATIONS:	
ID 102	INFLUENCE OF pH AND INOCULUM VOLUME IN CONSTRUCTED WETLANDS AT LABORATORY SCALE TO REMOVE CADMIUM FROM “LA ESPERANZA” ACID MINE DRAINAGE <u>Lucia Ramos, Fernando Merino and Susana Gutierrez</u> Microbiology and Microbial Biotechnology Laboratory, Biological Sciences Faculty, Universidad Nacional Mayor de San Marcos, Lima, Peru
ID 79	COUPLING ACID MINE DRAINAGE TREATMENT AND BIOREMEDIATION OF ORGANIC BIOWASTE BY MEANS OF CONSTRUCTED WETLANDS <u>Irene Acosta Hernández, H. Lizeth Medina-Díaz, Y. Delgado González, F.J. López- Bellido Garrido, D. Sánchez Ramos and J. Villaseñor Camacho</u> Chemical Engineering Department, Research Institute for Chemical and Environmental Technologies (ITQUIMA), University of Castilla La Mancha UCLM, Ciudad Real, Spain
ID 179	ESTIMATION OF NITROGEN FIXATION RATE IN A DUCKWEED LEMNA MINOR AQUA SYSTEM <u>Ioanna Goudeli¹, Anestis Vlysidis^{1,2}</u> ¹ School of Chemical Engineering, National Technical University of Athens, Greece ² School of Chemical & Environmental Engineering, Technical University of Crete, Chania, Greece
12:30 - 13:15	PLENARY LECTURE #3 – ROOM A Session Chairpersons: Nicolas Kalogerakis & Fabio Fava
ID 189	DEPOLLUTING THE MEDITERRANEAN: JOIN THE EUROPEAN MISSION Claudia PECORARO <i>Policy Officer, Sea and Ocean Unit, European Commission</i>
13:15 – 18:45	WEDNESDAY AFTERNOON - FREE TIME
13:30 - 15:00	EFB - Environmental Biotechnology Section meeting (Room B)
20:00 - 00:30	Conference GALA DINNER Location: EUPHORIA hotel (Busses leave at 19:15 from the venue hotel)

THURSDAY, JUNE 16 TH , 2022	
8:30 - 9:15	PLENARY LECTURE #4 – ROOM A Session Chairpersons: Nicolas Kalogerakis & Fabio Fava
ID 190	TOWARDS SUSTAINABLE WATER AND LAND MANAGEMENT - OPTIMIZING THE WATER-ECOSYSTEM-FOOD NEXUS AT KOILIARIS CRITICAL ZONE OBSERVATORY Prof. Nikolaos Nikolaidis <i>Department of Chemical & Environmental Engineering, TU-Crete, Chania, Greece</i>
9:15 - 11:00	SESSION – 10A: Valorization – III – (ROOM B) Chairpersons: Giulio Zanaroli & Abhijit Debnath
ID 146	OLIVE MILL WASTE VALORIZATION FOR THE PRODUCTION OF HIGH ADDED VALUE BIOPRODUCTS: AN INTEGRATED APPROACH Anestis Vlysidis^{1,2}, K. Tzathas² ¹ School of Chemical & Environmental Engineering, Technical University of Crete, Chania, Greece ² School of Chemical Engineering, National Technical University of Athens, Greece
ID 139	LACTOBIONIC ACID PRODUCTION FROM CHEESE WHEY BY ENTEROBACTER SP. Roberta Romano, F. Fava and N. Raddadi <i>Dept. of Civil, Chemical, Environmental and Materials Engineering – DICAM, Univ. of Bologna, Italy</i>
ID 127	COULD INDUSTRIAL HEMP SUPPORT THE RESTORATION OF CONTAMINATED SITES? Danai Kotoula, P. Georgiou, G. Papadopoulos and E.G. Papazoglou <i>Department of Crop Science, Agricultural University of Athens, Athens, Greece</i>
ID 133	BIODEGRADATION OF OILY WASTEWATER AND PRODUCTION OF BIO-SURFACTANTS AND POLYHYDROXYALKANOATES BY <i>PSEUDOMONAS</i> STRAINS C. Varnava¹, E. Pinakoulaki², N. Chronakis², Y. Apidianakis³ and Argyro Tsipa^{1,4} ¹ Dept of Civil and Environmental Engineering, University of Cyprus, Nicosia, Cyprus ² Dept of Chemistry, University of Cyprus, Nicosia, Cyprus ³ Dept of Biological Sciences, University of Cyprus, Nicosia, Cyprus ⁴ Nireas International Water Research centre, University of Cyprus, Nicosia, Cyprus
FLASH ORAL PRESENTATIONS:	
ID 129	HYALURONIC ACID, CHONDROITIN SULFATE AND OLIGOPEPTIDES WITH ANTI-INFLAMMATORY ACTIVITY ISOLATED FROM ANIMAL BY-PRODUCTS Hana Stiborova¹, P. Kastanek², J. Viktorova¹, P. Lipovova¹ and K. Demnerova¹ ¹ Dept of Biochemistry and Microbiology, Univ. of Chemistry and Technology, Prague, Czechia ² EcoFuel Laboratories s.r.o., Prague, Czechia
09:15-11:00	SESSION – 10B: Phytoremediation of mixed contaminants – (ROOM A) Chairpersons: Tomasz Plociniczak & Jaco Vangronsveld
ID 42	ADVANCING IN THE APPLICATION OF INNOVATIVE PHYTOMANAGEMENT STRATEGIES IN CONTAMINATED AREAS OF THE SUDOE SPACE: PROGRESS OF THE Phy2SUDOE PROJECT Michel Mench¹, C. Garbisu², L. Epelde², S. Soussou³, M. Soto Lopez⁴, A. Hernandez⁴, L. Dudoit⁵, J. Vilela⁶, P. Castro⁷, H. Moreira⁷, S. Almeida Pereira⁷, B. Rodríguez Garrido⁸, A. Pietro Fernandez⁸, C. Monterroso Martínez⁹, E. Cardoso⁷, S. Jouveau¹, R. Burlett¹, S. Delzon¹, A. Albareda⁶, A. Nunes de Sousa¹⁰ and J. Maria Becerril¹¹ ¹ INRAE, BIOGECO, University of Bordeaux, Pessac, France ² NEIKER-Instituto Vasco de Investigación y Desarrollo Agrario, Derio, Spain ³ Fertit'Innov Environnement, Grabels, France ⁴ Universidad del País Vasco, Departamento Zoología y Biología Celular Animal, Leioa, Spain ⁵ Dept de la Charente, Angoulême, France ⁶ Centro de Estudios Ambientales, Vitoria-Gasteiz, Spain ⁷ Universidade Católica Portuguesa, Porto, Portugal ⁸ Instituto de Investigaciones Agrobiológicas de Galicia (IIAG), CSIC, Santiago de Compostela, Spain ⁹ University of Santiago de Compostela, Dept. de Edafología y Química Agrícola, Spain ¹⁰ CloverStrategy, Coimbra, Portugal ¹¹ Universidad del País Vasco, Leioa, Spain
ID 87	USE OF NANOMATERIALS FOR ENHANCING SUNFLOWER ASSISTED BIOREMEDIATION OF A PCB AND HEAVY METAL POLLUTED SOIL

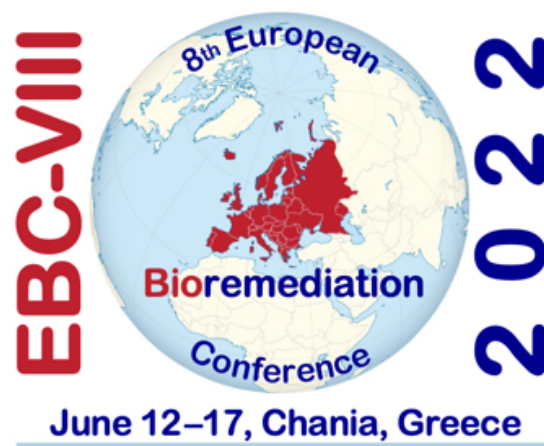
	G. Aimola¹, A. Gatto¹, L. Curri², D. Napolitano³, A. Lacirignola³, L. Rolando³, E. Fanizza⁴, M. Tumolo¹, R. Comparelli², A. Barra Caracciolo³ and <u>Valeria Ancona¹</u> ¹ Water Research Institute, National Research Council (IRSA-CNR) Bari, Italy ² Dept. of Chemistry, University of Bari, Italy ³ CISA SpA, Massafra (TA), Italy ⁴ Institute of Chemical and Physical Processes, National Research Council (IPCF-CNR) Bari, Italy ⁵ Water Research Institute, National Research Council (IRSA-CNR) Montelibretti, Rome, Italy
ID 94	THE ACTIVITY OF THE ZCR6 STRAIN DURING THE PHYTOREMEDIATION OF SOIL CO-CONTAMINATED WITH HYDROCARBONS AND HEAVY METALS M. Prach¹, P. Niemiec¹, A. Sinkkonen² and <u>Magdalena Pacwa-Plociniczak¹</u> ¹ Institute of Biology, Biotechnology and Environmental Protection, Univ. of Silesia in Katowice, Poland ² Natural Resources Institute Finland, Finland
ID 95	BACTERIAL ASSISTED PHYTOREMEDIATION OF SOIL CO-CONTAMINATED WITH HYDROCARBONS AND HEAVY METALS USING ZEA MAYS AND ZCR5 STRAIN A. Kumor¹, S. Gobetti¹, <u>Tomasz Plociniczak¹</u>, A. Sinkkonen² and M. Pacwa-Plociniczak¹ ¹ Institute of Biology, Biotechnology and Environmental Protection, Univ. of Silesia in Katowice, Poland ² Natural Resources Institute Finland, Finland
ID 160	ASSESSMENT OF <i>VICIA SATIVA</i>, <i>TRIFOLIUM INCARNATUM</i>, AND <i>TRIFOLIUM RESUPINATUM</i> NUTRIENT SUPPORT AND PHYTOREMEDIATION POTENTIAL AS A COVER CROP FOR WILLOW <u>Yu Wang¹</u>, Margaret Graham², Alistair Hamilton¹, Andrew Innes¹, and Jennifer Carfrae¹ ¹ Scotland's Rural College (SRUC), United Kingdom ² School of Geoscience, University of Edinburgh, United Kingdom
ID 59	CUCURBITS AND THEIR SECONDARY METABOLITES AS STIMULATORS OF BIOLOGICAL REMEDIATION OF SOIL CONTAMINATED WITH PHENOXY ACID HERBICIDES <u>Elżbieta Mierzejewska^{1,2}</u>, S. Thijs², W. Toloczko³, A. Baran⁴, M. Tankiewicz⁵, K. Zagibajlo⁶, J. Vangronsveld² and M. Urbaniak¹ ¹ UNESCO Chair in Ecohydrology and Applied Ecology, University of Lodz, Poland ² Centre for Environmental Sciences, University of Hasselt, Belgium ³ Dept of Physical Geography, Faculty of Geography, University of Lodz, Poland ⁴ Dept of Agricultural and Environmental Chemistry, University of Agriculture in Krakow, Poland ⁵ Dept of Environmental Toxicology, Faculty of Health Sciences, Medical University of Gdansk, Poland ⁶ Food Safety Laboratory, The National Institute of Horticultural Research in Skierniewice, Poland
	FLASH ORAL PRESENTATIONS:
ID 27	BIOFORTIFIED AND CLIMATE-RESILIENT FOOD AND FODDER PRODUCTION ON MARGINAL AND CONTAMINATED SOILS <u>Michel Mench¹</u>, E. Loit², I. Keres², V. Povilaitis³, F. Rineau⁴, B. Rutkowska⁵, P. Schröder⁶, K. Tiideberg², W. Szulc⁵, R. Zydelis³ ¹ INRAE, BIOGECO, University of Bordeaux, Pessac, France ² Estonian University of Life Sciences, Crops Science and Plant Biology, Tartu, Estonia ³ Lithuanian Research Centre for Agriculture and Forestry, Kedainiai distr., Lithuania ⁴ Universiteit Hasselt, Environmental Biology, Hasselt, Belgium ⁵ Warsaw University of Life Sciences, Warsaw, Poland ⁶ Helmholtz Zentrum München, Deutsches Forschungszentrum für Gesundheit und Umwelt (GmbH), Neuherberg, Germany
ID 99	NATURE BASED SOLUTIONS FOR RESTORING A MULTI-CONTAMINATED SOIL: A MICROCOSM STUDY WITH BRASSICA NAPUS <u>Valeria Ancona¹</u>, G. Aimola¹, A. Gatto¹, V.A. Lacirignola², D. Napolitano², P. Grenni³, G.L. Garbini³, D. Losacco¹, S. Convertini⁴, P.M. Carmignano⁴, V.F. Uricchio¹ and A.B. Caracciolo³ ¹ Water Research Institute, National Research Council (IRSA-CNR) Bari, Italy ² CISA SpA, Massafra (TA), Italy ³ Water Research Institute, National Research Council (IRSA-CNR) Montelibretti, Rome, Italy ⁴ ReAgri srl, Massafra (TA), Italy
ID 148	THE DIVERSE PREDISPOSITION OF VARIOUS MACROPHYTE SPECIES FOR GROWTH IN THE HYBRID SEQUENTIAL BIOFILTRATION SYSTEM <u>Anna Wyrwicka-Drewniak¹</u>, Edyta Kiedrzyńska^{2,3}, Marcin Kiedrzyński⁴ and Patrycja Kopa¹

	¹ Dept of Plant Physiology and Biochemistry, University of Lodz, Poland ² European Regional Centre for Ecohydrology of the Polish Academy of Sciences, Lodz, Poland ³ UNESCO Chair Ecohydrology and Applied Ecology, University of Lodz, Poland ⁴ Dept of Biogeography Paleocology and Nature Conservation, University of Lodz, Poland
ID 107	PGP ENDOPHYTIC BACTERIA AS RESOURCES FOR RHIZO-REMEDIATION OF PROTECTED AREAS AFFECTED BY PETROLEUM HYDROCARBONS A. Melzi, S. Zecchin, <u>Martina Bertolini</u>, L. Cavalca Dept of Food, Environmental and Nutritional Sciences (DeFENS), Università degli Studi di Milano, Italy
ID 138	RHIZOSPHERIC MICROBIOMES OF <i>AMARANTHUS</i> SPP. GROWN ON SOILS WITH DIFFERENT ANTHROPOGENIC POLYELEMENTAL ANOMALIES <u>Anna Muratova¹</u> and S. Gorelova² ¹ Institute of Biochemistry and Physiology of Plants and Microorganisms, Russian Academy of Sciences, Saratov, Russia ² Tula State University, Tula, Russia
ID 180	BRIDGING THE GAP BETWEEN PHYTOREMEDIATION SOLUTIONS ON GROWING ENERGY CROPS ON CONTAMINATED LANDS AND CLEAN BIOFUEL PRODUCTION – THE GOLD PROJECT <u>Eleni G. Papazoglou¹</u> , M. Wójcik² , J. Vangronsveld^{2,3} , N. Oustriere⁴ , M. Mench⁵ , W. Zegada-Lizarazu⁶ , E. Alexopoulou⁷ ¹ Dept. of Crop Science, Agricultural University of Athens, Athens, Greece ² Dept. of Plant Physiology and Biophysics, Maria Curie-Skłodowska University, Lublin, Poland ³ Centre for Environmental Sciences, Hasselt University, Diepenbeek, Belgium ⁴ Institut Supérieur d'Agriculture, Yncréa Hauts-de-France, Lille Cedex, France ⁵ INRAE, BIOGECO, University of Bordeaux, Pessac, France ⁶ Dept. of Agricultural and Food Sciences, University of Bologna, Bologna, Italy ⁷ Centre for Renewable Energy Sources and Saving, Attika, Greece
11:00-11:30	Coffee break
11:30-12:30	SESSION - 11A: Valorization – IV (ROOM B) Chairpersons: Joan Garcia & Sylwia Siebielec
ID 136	FROM WASTE TO RESOURCE: PRODUCTION OF BIOCHAR FROM OLIVE MILL SOLID WASTE FOR A NOVEL TREATMENT OF MICROPOLLUTANTS IN EFFLUENTS <u>Sara Azerrad^{1,2}</u> , G. Peer^{1,3} and H. Azaizeh^{3,4} ¹ Shamir Research Institute, University of Haifa, Qatzrin, Israel ² The Natural Resources and Environmental Research Center—NRERC, University of Haifa, Haifa, Israel ³ Tel Hai College, Department of Environmental Science, Upper Galilee, Israel ⁴ Institute of Applied Research (Affiliated with University of Haifa), The Galilee Society, Shefa-Amr, Israel
ID 154	REDUCING WATER CONSUMPTION IN THE EXTRACTION PROCESS OF A FUCOSE-RICH POLYMER: IMPACT ASSESSMENT OF A NEW METHODOLOGY <u>Silvia Baptista^{1,2,3}</u> , C.A.V. Torres^{1,2} , C. Sevrin⁴ , C. Grandfils⁴ , M.A.M. Reis^{1,2} , F. Freitas^{1,2} ¹ Associate Laboratory i4HB - Institute for Health and Bioeconomy, School of Science and Technology, NOVA University Lisbon, Caparica, Portugal ² UCIBIO – Applied Molecular Biosciences Unit, Department of Chemistry, School of Science and Technology, NOVA University Lisbon, Caparica, Portugal ³ 73100 Lda., Edifício Arcis, Lisboa, Portugal ⁴ Interfaculty Research Centre of Biomaterials (CEIB), University of Liège, Liège, Belgium
	FLASH ORAL PRESENTATIONS:
ID 177	CONVERTING WASTE INTO ORGANIC BIOFERTILISERS SUPPORTING CROP RESISTANCE AGAINST DROUGHT <u>Sylwia Siebielec¹</u> , G. Siebielec² , A. Lewicki³ , J. Pulka³ , S. Szufa⁴ , P. Piersa⁴ and L. Adrian⁴ ¹ Dept. of Agricultural Microbiology, Inst. of Soil Science and Plant Cultivation, Pulawy, Poland ² Dept. of Soil Science Erosion and Land Protection, Inst. of Soil Science and Plant Cultivation, Poland ³ Dept. of Biosystems Engineering, Poznan University of Life Sciences, Poland ⁴ Faculty of Process Engineering and Environmental Protection, Łódź University of Technology, Poland
11:30-12:30	SESSION -11B: Bioremediation of metals – bioleaching (ROOM B) Chairpersons: Marta Woźniak-Karczewska & Irene Acosta
ID 08	BIOLEACHING OF REAL MINE TAILINGS USING AUTOCHTHONOUS MICROORGANISMS: EFFECTS OF ULTRASOUNDS PRETREATMENT

	Irene Acosta, F.J. Fernández-Morales, H.L. Medina-Díaz, L. Rodríguez and J. Villaseñor Chemical Engineering Department, Research Institute for Chemical and Environmental Technologies (ITQUIMA), University of Castilla La Mancha UCLM, Ciudad Real, Spain
ID 54	COPPER BIOSORPTION BY EXOPOLYSACCHARIDE-PRODUCING CYANOBACTERIA Matilde Ciani, A. Adessi, R. de Philippis Dept of Agriculture, Food, Environment and Forestry (DAGRI), University of Florence, Italy
ID 70	AMENDMENT-DRIVEN REARRANGEMENT OF NATIVE BACTERIAL COMMUNITIES FOR ENHANCING Cr(VI) BIOREMEDIATION Marina Tumolo^{1,2}, D. Losacco^{1,2}, A. Volpe, V.F. Uricchio¹, D. De Paola³ and V. Ancona¹ ¹ Water Research Institute - Italian National Research Council, Bari, Italy ² Department of Biology- University of Bari, Italy ³ Institute of Biosciences and Bioresources- Italian National Research Council, Bari, Italy
	FLASH ORAL PRESENTATIONS:
ID 126	HEAVY METAL BIOSORPTION FROM AQUEOUS SOLUTIONS BY EPS-PRODUCING <i>SERRATIA PLYMUTHICA</i> STRAINS Rocco Zanetti, Milena Colombo, Sarah Zecchin, Martina Bertolini, Lucia Cavalca Dept of Food, Environmental and Nutritional Sciences, University of Milan, Italy
ID 183	BIOREMEDIATION OF METALLURGICAL SLAGS: INSIGHT FROM EXPERIMENTAL EXPOSURE TO BACTERIA, PLANTS AND ORGANIC EXTRACTS Anna Potysz¹, Artur Pędziwiatr², Jakub Kierczak¹, Sebastian Hedwig³ and Markus Lenz³ ¹ University of Wrocław, Institute of Geological Sciences, Wrocław, Poland ² Warsaw University of Life Sciences (SGGW), Faculty of Agriculture and Biology, Dept of Soil Environment Sciences, Warsaw, Poland ³ Institute for Ecopreneurship, School of Life Sciences, University of Applied Sciences and Arts Northwestern Switzerland, Switzerland
12:30-13:30	CLOSING CEREMONIES & AWARDS - ROOM A (Best POSTER & ORAL by Graduate Student)
13:30-15:00	LUNCH (Minoa Palace Hotel)
15:00	END OF CONFERENCE

FRIDAY, JUNE 17TH, 2022	
08:00-18:00	Conference trip Rethymno old-city tour (primary) or Elafonissi beach tour (if needed)

Conference Programme



(as of June 9, 2022)

POSTER PRESENTATIONS

Poster set up: Monday 10:30 (latest)
Presentation period: Monday 18:30 to Wednesday 13:00
Poster removal: Thursday 11:00 (earliest)

Location	Marine Pollution and Blue Biotechnology	
#1	ID 45	BIOSTIMULATION EFFECT OF DIFFERENT PHAs ON A MARINE PCB DECHLORINATING MICROBIAL COMMUNITY A. Botti¹, Giulio Zanaroli¹ and F. Fava³ ¹ Dept. of Civil, Chemical, Environmental and Materials Engineering – DICAM, Bologna, Italy,
#2	ID 51	COMPARISON OF HYDROCARBON-DEGRADING CONSORTIA FROM SURFACE AND DEEP WATERS OF THE EASTERN MEDITERRANEAN SEA Georgia Charalampous¹, E. Fragkou¹, K.A. Kormas², A.B. De Menezes³, P.N. Polymenakou⁴, N. Pasadakis^{5,6}, N. Kalogerakis^{1,6}, E. Antoniou^{1,5}, and E. Gontikaki^{1,6} ¹ School of Chemical and Environmental Engineering, Technical University of Crete, Chania, Greece ² Dept of Ichthyology and Aquatic Environment, University of Thessaly, 38446 Volos, Greece ³ School of Biology and Environmental Science, University College Dublin, Belfield, Ireland ⁴ Institute of Marine Biology, Biotechnology and Aquaculture, HCMR, Heraklion, Greece ⁵ School of Mineral Resources Engineering, Technical University of Crete, Chania, Greece ⁶ Institute of Geoenergy, Foundation for Research and Technology Hellas, Chania, Greece
#3	ID 83	THE DIATOM PHAEODACTYLUM TRICORNUTUM MODULATES BIOACTIVE COMPOUNDS BIOSYNTHESIS IN RESPONSE TO ENVIRONMENTAL STRESS: FROM LAB SCALE TO APPLICATION IN AN INTEGRATED MULTITROPHIC AQUACULTURE SYSTEM Concetta Maria Messina¹, E. Curcuraci¹, S. Manuguerra¹, C. Hellio², A. Santulli^{1,2,3} ¹ Department of Earth and Marine Sciences DiSTeM, University of Palermo, Trapani, Italy ² Université de Brest, IRD, CNRS, Ifremer, LEMAR, F-29280 Plouzané, France ³ Istituto di Biologia Marina, Consorzio Universitario della Provincia di Trapani, Trapani, Italy

#4	ID 132	DIATOMS FOR HEAVY METAL REMEDIATION: PRELIMINARY STUDIES FOR COPPER REMOVAL E. Cavalletti¹, P. Chiaiese², L. Barra³, A. Gallo⁴, M. Spinelli⁵, A. Amoresano⁵, <u>Giovanna Romano¹</u>, S. Balzano¹ and A. Sardo¹ ¹ Stazione Zoologica Anton Dohrn Napoli, Dept of Ecosustainable Marine Biotechnologies, Napoli, Italy ² University of Naples Federico II, Dept of Agricultural Sciences, Portici (NA), Italy ³ Stazione Zoologica Anton Dohrn Napoli, Dept of Ecosustainable Marine Biotechn., Amendolara (Cs) ⁴ Stazione Zoologica Anton Dohrn Napoli, Dept of Biology and Evolution of Marine Organisms, Italy ⁵ University of Naples Federico II, Department of Inorganic and Organic Chemistry, Napoli, Italy
	Water Issues	
#5	ID 24	DISINFECTION OF WATER BY UV IN THE PRESENCE OF POLYETHYLENE MICROPLASTICS K. Manoli¹, <u>Andrea Naziri¹</u>, I. Ttofi¹, C. Michael¹, I.J. Allan² and D. Fatta- Kassinos^{1,3} ¹ Nireas-International Water Research Center, University of Cyprus, Nicosia, Cyprus. ² Norwegian Institute for Water Research, Oslo, Norway. ³ Dept of Civil and Environmental Engineering, University of Cyprus, Nicosia, Cyprus.
#6	ID 172	MICROBIALY-INDUCED CARBONATE PRECIPITATION BY ARTHROBACTER, BACILLUS AND MICROCOCCUS SPECIES ISOLATED FROM MARINE SEDIMENTS Panagiotis Persianis¹, Rea Fournari¹, Ioannis Rigopoulos¹, Ioannis Ioannou¹, <u>Argyro Tsipa^{1,2}</u> ¹ Department of Civil and Environmental Engineering, University of Cyprus, Nicosia, Cyprus ² Nireas International Water Research Center, University of Cyprus, Nicosia, Cyprus
#7	ID 166	APPLICATION OF OZONATION IN DISINFECTION OF SALINE WATER: ENHANCED POTENTIAL FOR BALLAST WATER TREATMENT BY OZONE NANOBUBBLES TECHNOLOGY <u>Petroula Seridou</u> and N. Kalogerakis School of Chemical & Environmental Engineering, Technical University of Crete, Chania, Greece
	Bioelectrochemical Systems for Bioremediation	
#8	ID 100	INTEGRATED SYSTEMS FOR EFFECTIVE ENVIRONMENTAL REMEDIATION Rocío Barros¹, B. Velasco Arroyo¹, A. Hassan Ali Khan¹, S. Curiel¹, E. Borrás², M. di Lorenzo³, A. Pérez-de-Mora⁴ and C. Rad⁵ ¹ International Research Center in Critical Raw Materials for Advanced Industrial Technologies (ICCRAM). University of Burgos, Burgos, Spain. ² LEITAT Technological Center, Circular Economy Dept, Terrassa, Barcelona, Spain ³ Dept of Chemical Engineering and Centre for Biosensors, Bioelectronics & Biodevices (C3Bio), University of Bath, Claverton Down, UK ⁴ TAUW GmbH, Dept. of Soil and Groundwater, München, Germany ⁵ Research Group in Composting (UBUCOMP). University of Burgos, Faculty of Sciences, Burgos Spain
#9	ID 47	INSIGHT THE SOIL MICROBIAL COMMUNITY OF TERRESTRIAL MICROBIAL FUEL CELLS PRODUCING BIOENERGY <u>Anna Barra Caracciolo¹</u> , G.L. Garbini ^{1,2} , L. Rolando ¹ , A. Visca ¹ , V. Ancona ³ , D. Borello ⁴ , G. Gagliardi ⁴ , C. Cosentini ⁴ , P. Grenni ¹ ¹ Water Research Institute, National Research Council (IRSA-CNR) Montelibretti, Rome, Italy ² Dept of Ecology and Biological Sciences, Tuscia University, Viterbo, Italy ³ Water Research Institute, National Research Council (IRSA-CNR) Bari, Italy ⁴ Dept of Mechanical and Aerospace Engineering, Sapienza University of Rome, Italy
#10	ID 143	EFFECT OF GAMMA IRRADIATION PRETREATMENT ON THIABENDAZOLE DEGRADATION COUPLED TO ENERGY PRODUCTION BY BIOELECTRO-CHEMICAL PROCESS <u>Nesrine Saidi¹</u> , B. Erable ² , R. Chaouachi ¹ , S. Saadaoui ¹ , L. Etcheverry ² , A. Slaheddine Masmoudi ¹ , A. Cherif ¹ , H. Chouchane ¹ ¹ Univ. Manouba, ISBST, BVBGR-LR11ES31, Biotechpole Sidi Thabet, Ariana, Tunisia ² Laboratoire de Génie Chimique, Université de Toulouse, CNRS, INPT, UPS, Toulouse, France
	Plastics & MPs: fragmentation, monitoring, biodegradation, fate, recycling	
#11	ID 05	THE POTENTIAL FOR PHYTOREMEDIATION OF MICROPLASTICS WITH AQUATIC MACROPHYTE LEMNA MINOR <u>Ula Rozman</u> and G. Kalčíková University of Ljubljana, Faculty of Chemistry and Chemical Technology, Ljubljana, Slovenia

#12	ID 31	EVALUATION OF MP ECOTOXICITY AND TRANSFER IN <i>SPIRODELA-ECHINOGAMMARUS</i> TROPHIC SYSTEM V. Iannilli¹, F. Lecce¹, G. Sciacca¹, F. Pietrini², <u>Laura Passatore²</u>, S. Carloni² and M. Zacchini² ¹ ENEA, Agenzia nazionale per le nuove tecnologie, l'energia e lo sviluppo economico sostenibile, Dip. Sostenibilità dei Sistemi Produttivi e Territoriali, Roma, Italy ² Istituto di Ricerca sugli Ecosistemi Terrestri (IRET), Consiglio Nazionale delle Ricerche (CNR), Monterotondo Scalo, Roma, Italy
#13	ID 68	FUNGAL COMMUNITY SUCCESSION OF THE SOUTH-EASTERN MEDITERRANEAN PLASTISPHERE <u>Katerina Karkanorachaki</u>, E. Syranidou and N. Kalogerakis School of Chemical & Environmental Engineering, Technical University of Crete, Chania, Greece
#14	ID 120	THE EFFECT OF PVC MICROPLASTICS ON REACTIVE OXYGEN SPECIES GENERATION IN A RAINBOW TROUT CELL LINE <u>Jana Boháčková^{1,2}</u>, T. Cajthaml^{1,2} ¹ Institute for Environmental Studies, Faculty of Science, Charles University, Czech Republic ² Institute of Microbiology of the Czech Academy of Sciences, Czech Republic
#15	ID 168	A NOVEL VOLTAMMETRIC NANOSENSOR FOR THE DETECTION OF MICROPLASTICS IN AQUEOUS SAMPLES <u>Gregor Marolt</u>, U. Rozman and G. Kalčíkova University of Ljubljana, Faculty of Chemistry and Chemical Technology, Ljubljana, Slovenia
#16	ID 182	IMPROVING THE THERMAL STABILITY OF A MARINE PETASE WITH TARGETED EVOLUTION <u>Jana Brickem^{1,2}</u> and Başak Öztürk² ¹ Faculty of Life Sciences, Technische Universität Braunschweig, Germany ² Junior Research Group Microbial Biotechnology, Leibniz Institute DSMZ-German Collection of Microorganisms and Cell Cultures, Braunschweig, Germany
Toxicity & Risk		
#17	ID 56	ARSENIC POLLUTION AND HUMAN HEALTH RISK ASSESSMENT IN THE REGION OF RACHA-LECHKHUMI AND KVEMO SVANETI OF GEORGIA V. Tebidze¹, <u>Elene Zurabishvili¹</u>, G. Tatanashvili¹, T. Varazi¹, E. Bunin² and E. Bakradze³ ¹ East European University, Tbilisi, Georgia ² Dept of Immunology, Microbiology and Parasitology, Univ. of the Basque Country, Leioa, Spain ³ LEPL Environmental Pollution Monitoring Dept, The National Environmental Agency, Tbilisi, Georgia
#18	ID 147	EFFECT OF SELECTED TRICHODERMA STRAINS ON WHEAT SEEDLINGS GROWN IN CADMIUM-CONTAMINATED SOIL <u>Patrycja Kopa¹</u>, M. Szczech², A. Witusińska¹, A. Wyrwicka-Drewniak¹ and E. Gajewska¹ ¹ Dept of Plant Physiology and Biochemistry, University of Lodz, Poland ² Dept of Microbiology and Rhizosphere, Institute of Horticulture - NRI, Skierniewice, Poland
#19	ID 174	PERFORMANCE OF THREE BIOMIMETIC STATIONARY PHASES FOR THE PREDICTION OF AQUATIC TOXICITY OF PHARMACEUTICALS C. Stergiopoulos, L.-A. Tsakanika, E. Notari, F. Katsaras, M. Ochsenkühn- Petropoulou and <u>Fotios Tsopelas</u> School of Chemical Engineering, National Technical University of Athens, Greece
#20	ID 58	EFFECT OF STUDENT ATTENDANCE ON AIRBORNE MICROBIAL CHARACTERISTICS IN EDUCATIONAL FACILITIES V. Bofili, L. Raisi and <u>Eleftheria Katsivela</u> Department of Electronic Engineering, Hellenic Mediterranean University, Chania, Greece
#21	ID 33	CHANGE OF SOIL ENZYME ACTIVITY IN RESPONSE TO ARSENIC TOXICITY: HYPERACCUMULATOR VS. NON-HYPERACCUMULATOR <u>Veronika Zemanová¹</u>, D. Pavlíková¹ and M. Pavlík² ¹ Dept. of Agro-Environmental Chemistry and Plant Nutrition, Czech University of Life Sciences Prague, Czechia ² Isotope Laboratory, Institute of Experimental Botany of the Czech Academy of Sciences, Czechia
Wastewater treatment		
#22	ID 175	TREATMENT OF HOSPITAL WASTEWATER: EMPHASIS ON ECOTOXICITY AND ANTIBIOTIC RESISTANCE GENES <u>Andreas Kaliakatsos¹</u>, Th. Manios², A.S. Stasinakis³, N. Katsarakis⁴, M. Fountoulakis³, S. Dokianakis⁴, N. Kalogerakis¹, I. Gounaki¹, D. Venieri¹

		¹ School of Chemical & Environmental Engineering, Technical University of Crete, Chania, Greece. ² Department of Agriculture, Hellenic Mediterranean University, Heraklion, Greece. ³ Department of Environment, University of the Aegean, Mytilene, Greece. ⁴ Center of Materials Technology and Photonics, Hellenic Mediterranean University, Heraklion, Greece
		Circular Economy and Valorization
#23	ID 07	INTEGRAL VALORIZATION OF AGRICULTURAL WASTE BY HYDROTHERMAL CO-CARBONIZATION R.P. Ipiates^{1,2}, E. Diaz¹, E. Diaz-Portuondo², A.F. Mohedano¹, M.A. de la Rubia¹ ¹ Chemical Engineering Department, Universidad Autónoma de Madrid, Madrid, Spain ² Arquimea-Agrotech, 28400 Collado Villalba – Madrid, Spain
#24	ID 09	IMPROVEMENT OF HYDROCHAR PROPERTIES BY ACID-ASSISTED HYDROTHERMAL CARBONIZATION A.F. Mohedano, A. Sarrion, R.P. Ipiates, M.A. de la Rubia, E. Diaz Dept of Chemical Engineering, Faculty of Science, Universidad Autonoma de Madrid, Madrid, Spain
#25	ID 82	SUPPLY AND APPLICATION OF FIBER CROPS FOR SUSTAINABLE SOIL REMEDIATION AND BIO-BASED RAW MATERIAL PRODUCTION FOR INDUSTRIAL USES – FORTE PROJECT (https://www.forte-project.gr) Eleni G. Papconazoglou Agricultural University of Athens, Dept of Crop Science, Athens, Greece.
#26	ID 89	VALORIZATION OF PRIMARY BUOYANT MUNICIPAL WASTEWATER SLUDGE FRACTION THROUGH VOLATILE FATTY ACIDS PRODUCTION Akarsh Swamilingappa Anniah, G. Agustín Martínez, F. Fava, and L. Bertin Dept. of Civil, Chemical, Environmental, and Materials Engineering – DICAM, University of Bologna, Italy
#27	ID 90	PREFERABLE ENZYMATIC HYDROLYSIS OF SOFT TISSUE WASTE INTO FERMENTABLE SUGARS WITH SUBSEQUENT CONVERSION INTO BIOETHANOL Tarek H. Taha¹, A. Mansy², M. Abu-Saied³, H. El-Gendi⁴, E. El Desouky⁵, R. Amer¹ ¹ Environmental Biotechnology Dept, Genetic Engineering and Biotechnology Research Institute (GEBRI), City of Scientific Research and Technological Applications (SRTA-CITY), Alexandria, Egypt. ² Environment and Natural Materials Research Institute (ENMRI), City of Scientific Research and Technological Applications, (SRTA-CITY), Alexandria, Egypt. ³ Polymer Materials Research Dept, Advanced Technology and New Materials Research Institute, City of Scientific Research and Technological Applications (SRTA-CITY), Alexandria, Egypt. ⁴ Bioprocess Development Dept, Genetic Engineering and Biotechnology Research Institute (GEBRI), City of Scientific Research and Technological Applications (SRTA-CITY), Alexandria, Egypt. ⁵ Chemistry department, Faculty of science, Alexandria University, Egypt.
#28	ID 129	HYALURONIC ACID, CHONDROITIN SULFATE AND OLIGOPEPTIDES WITH ANTI-INFLAMMATORY ACTIVITY ISOLATED FROM ANIMAL BY-PRODUCTS Hana Stiborova¹, P. Kastanek², J. Viktorova¹, P. Lipovova¹ and K. Demnerova¹ ¹ Dept of Biochemistry and Microbiology, Univ. of Chemistry and Technology, Prague, Czechia ² EcoFuel Laboratories s.r.o., Prague, Czechia
#29	ID 177	CONVERTING WASTE INTO ORGANIC BIOFERTILISERS SUPPORTING CROP RESISTANCE AGAINST DROUGHT Sylvia Siebielec¹, G. Siebielec², A. Lewicki³, J. Pulka³, S. Szufa⁴, P. Piersa⁴ and L. Adrian⁴ ¹ Dept. of Agricultural Microbiology, Inst. of Soil Science and Plant Cultivation, Pulawy, Poland ² Dept. of Soil Science Erosion and Land Protection, Inst. of Soil Science and Plant Cultivation, Poland ³ Dept. of Biosystems Engineering, Poznan University of Life Sciences, Poland ⁴ Faculty of Process Engineering and Environmental Protection, Łódź University of Technology, Poland

Bioremediation of Contaminated Sites		
#30	ID 81	IN-SITU INTEGRATED BIOLOGICAL APPROACHES FOR THE REMEDIATION AND THE REQUALIFICATION OF A HYDROCARBON POLLUTED URBAN AREA Silvia Crognale¹, R. Cristina¹, L. Davide¹, L. Dario¹, L.G. Valsecchi², D. Lia³, De Angelis Paolo¹ ¹DIBAF University of Tuscia, Viterbo, Italy ²Municipality of Pesaro, Italy ³Regional Agency for the Environmental Protection of Marche, Italy
#31	ID 71	COMBINED ADDITION OF BIOCHAR, BIOACTIVATORS AND PLANTS AS A SYNERGIC STRATEGY FOR THE TREATMENT OF PETROLEUM HYDROCARBON-CONTAMINATED SOIL V. Mazzurco Miritana¹, L. Passatore¹, M. Zacchini¹, F. Pietrini¹, S. Carloni¹, E. Peruzzi², S. Marinarì³, L. Massaccesi³, A. Barra Caracciolo⁴, P. Grenni⁴, L. Rolando⁴, Isabel Nogues¹ ¹Research Inst. on Terrestrial Ecosystems, Nat. Research Council (IRET-CNR), Rome, Italy ²Research Inst. on Terrestrial Ecosystems, Nat. Research Council (IRET-CNR) Pisa, Italy ³Dept for Innovation in Biological, Agro-food and Forest systems– Univ. of Tuscia, Viterbo, Italy ⁴Water Research Institute, Nat. Research Council (IRSA-CNR) Montelibretti, Rome, Italy
#32	ID 101	CRITICAL MICELLAR CONCENTRATION AND EMULSIFYING ACTIVITY OF A BIOSURFACTANT PRODUCED BY A PERUVIAN NATIVE STRAIN <i>Pseudomonas aeruginosa</i> 6K-11 P. Obregon, F. Merino and Susana Gutierrez Microbiology and Microbial Biotechnology Laboratory, Biological Sciences Faculty, Universidad Nacional Mayor de San Marcos, Lima, Lima, Peru
#33	ID 155	STUDY OF THE ELIMINATION OF PHOSPHATE AND NITRATE IN WATER BY USING IRON OXIDES NANOPARTICLES OBTAINED BY TOP TO DOWN APPROACH Vicenç Martí^{1,2}, J.A. Benito¹, I. Jubany², D. Ribas², R. Margalef-Martí³, R. Carrey³, N. Otero^{3,4} and A. Soler³ ¹Barcelona Research Center in Multiscale Science and Engineering-EEBE, Technical University of Catalonia (UPC), Barcelona, Spain ²Fundació CTM Centre Tecnològic, Manresa, Spain ³Grup de Mineralogia Aplicada i Geoquímica de Fluids, Facultat de Ciències de la Terra, Universitat de Barcelona (UB), Spain ⁴Serra Hunter Fellowship, Generalitat de Catalunya
#34	ID 37	MICROAEROBIC AND AEROBIC BTEX DEGRADING BIOFILM BACTERIA – POPULATION DYNAMICS IN PHYLOGENETIC AND FUNCTIONAL POINT OF VIEW Tibor Benedek¹, Flóra Szentgyörgyi², István Szabó², Balázs Kriszt² and András Táncsics¹ ¹Regional University Centre of Excellence in Environmental Industry, Szent István University, Hungary ²Dept of Environmental Safety and Ecotoxicology, Szent István University, Hungary
#35	ID 39	BACTERIAL BENZO(a)ANTHRACENE DEGRADATION PROCESSES IN SOIL ARE INFLUENCED BY OTHER HMW-PAHS AS CO-SUBSTRATES Maria Jordán, S.N. Jiménez-Volkerink, P. Martín, M. Grifoll and J. Vila Dept. of Genetics, Microbiology and Statistics, Faculty of Biology, University of Barcelona, Spain.
#36	ID 185	STUDY OF PHENANTHRENE MINERALIZATION IN SOILS ASSISTED BY BIOAUGMENTATION, BIOSTIMULATION AND CYCLODEXTRIN Alba Lara-Moreno^{1,2}, Esmeralda Morillo¹, Jaime Villaverde¹ ¹Dept of Agrochemistry, Environmental Microbiology and Soil Conservation, Institute of Natural Resources and Agrobiology of Seville, (IRNAS) CSIC, Seville, Spain ²Dept of Microbiology and Parasitology, Faculty of Pharmacy, University of Seville, Seville, Spain
Mycoremediation and composting		
#37	ID 125	VERMIREMEDIATION OF MICROPOLLUTANTS FROM SEWAGE SLUDGE AND ITS EFFECT ON EARTHWORMS Alena Grasserova^{1,2}, Natividad Isabel Navarro Pacheco^{1,3,4}, Jaroslav Semerad^{1,2}, Tomas Cajthaml^{1,2} ¹Institute of Microbiology of the Czech Academy of Sciences, Prague, Czechia ²Faculty of Science, Institute for Environmental Studies, Charles University, Prague, Czechia ³First Faculty of Medicine, Charles University, Prague, Czech Republic ⁴Cavanilles Institute of Biodiversity and Evolutionary Biology, Univ. of Valencia, Paterna, Valencia, Spain

#38	ID 118	DRAFT GENOME SEQUENCE OF CEPHALOTRICHUM SP. MUT 6686 (SORDARIO-MYCETES; MICROASCACEAE): INSIGHTS FOR MYCOREMEDIATION OF PETROLEUM-CONTAMINATED SITES. <u>Domenico Davolos</u> and B. Pietrangeli Dept of Techn. Innovations and Safety of Plants, Products and Anthropic Settlements, INAIL, Rome, Italy.
#39	ID 114	GENOME SEQUENCING OF THE HCH-DEGRADING PENICILLIUM GRISEOFULVUM MUT 5854, FIRST GENETIC DATA INTO MYCOREMEDIATION OF HCH-POLLUTED SITES <u>Davolos Domenico</u>¹, A. Ceci², O. Maggi² and A.M. Persiani² ¹Dept of Techn. Innovations and Safety of Plants, Products and Anthropic Settlements, INAIL, Rome, Italy. ²Dept of Environmental Biology, Sapienza University of Rome, Rome, Italy
#40	ID 106	VERMICOMPOST IMPROVES THE BIOREMEDIATION EFFICIENCY IN AN AGED CONTAMINATED SOIL WITH RECALCITRANT HYDROCARBONS S. Curiel-Alegre^{1,2}, Blanca Velasco-Arroyo¹, A. Martínez², C. Rumbo¹, A. Hassan-Ali Khan¹, J.A. Tamayo-Ramos¹, J.L.R. Gallego³, C. Rad² and R. Barros¹ ¹ICCRAM, Universidad de Burgos, Edificio I+D+i, Burgos, Spain ²UBUCOMP, Universidad de Burgos, Facultad de Ciencias, Burgos, Spain ³Environmental Biogeochemistry & Raw Materials Group and INDUROT, Mieres, Spain
Biodegradation		
#41	ID 128	BIODEGRADING BIOFILMS ON INNOVATIVE BIOPOLYMERIC SUPPORTS <u>Elisa Maria Petta</u>¹, M.C. Citarrella², R. Scaffaro², S. Cappello³, P. Quatrini¹ and V. Catania⁴ ¹Dept of Biological, Chemical and Pharmaceutical Sciences and Technologies (STEBICEF), University of Palermo, Palermo, Italy ²Dept of Engineering, University of Palermo, Palermo, Italy ³Inst. for Biological Resources and Marine Biotech., Nat. Research Council (CNR), Messina, Italy ⁴Dept of Earth and Marine Sciences (DiSTeM), University of Palermo, Palermo, Italy
#42	ID 178	<i>OCHROBACTRUM PITUITOSUM</i> STRAIN BU72, A NEW HYDROCARBONOCLASTIC BACTERIUM THROUGH EXOPOLYSACCHARIDE-BASED SURFACTANTS PRODUCTION M. Mahjoubi¹, H. Chouchane¹, H. Aliyu², Y. Souissi³, S. Cappello⁴, F. Mapelli⁵, S. Borin⁵, D. A. Cowan⁶, <u>Ameur Cherif</u>^{1*} ¹Univ. Manouba, ISBST, BVBGR-LR11ES31, Biotechpole SidiThabet, Ariana, Tunisia ²Inst. of Process Eng. in Life Science 2: Technical Biology, Karlsruhe Inst. of Tech., Karlsruhe, Germany ⁴Istituto per le Risorse Biologiche e le Biotecnologie Marine (IRBIM) – CNR of Messina, Messina, Italy ⁵DeFENS- University of Milan via Celoria 2, 20133 Milan, Italy ⁶Centre for Microbial Ecology and Genomics, University of Pretoria, Pretoria, South Africa
#43	ID 21	DEGRADATION OF PESTICIDES BY SELECTED BACTERIAL ISOLATES <u>Petra Lovecka</u>¹, B. Vrchotova¹, J. Volkova² and K. Demnerova¹ ¹Dept of Biochemistry and Microbiology, Univ. of Chemical Technology Prague, Prague, Czechia ²MONAS Technology, Czechia
#44	ID 32	PHARMACEUTICALS IN THE IS THE LARGEST CENTRAL EUROPEAN SHALLOW LAKE: BIODEGRADATION POTENTIAL OF THE INDIGENOUS MICROBES <u>Milán Farkas</u>, P. Harkai, M. Awode Funmilayo, T. Benedek, J. Háhn, G. Tóth, A. Tánicsics, B. Kriszt and S. Szoboszlai Inst. of Aquaculture and Environmental Safety, Hungarian Univ. of Agriculture and Life Sciences.
#45	ID 150	ANAEROBIC BIODEGRADATION OF PFAS IN A CONTAMINATED GROUNDWATER INCUBATED UNDER DIFFERENT TERMINAL ELECTRON ACCEPTING PROCESSES F. Bruni¹, A. Negroni¹, P. Pretto², C. Indorato³, E. Biagi¹, F. Fava¹ and <u>Giulio Zanaroli</u>¹ ¹Dept. of Civil, Chemical, Environ. and Materials Engineering – DICAM, Univ. of Bologna, Italy ²AIPU Associazione Internazionale Progetti Unesco, Italy ³Acque Veronesi s.c.a r.l., Italy
#46	ID 184	NOVEL NONYLPHENOL-DEGRADING BACTERIAL STRAIN ISOLATED FROM SEWAGE SLUDGE FOR ITS BIOREMEDIATION <u>Esmeralda Morillo</u>¹, I. Aguilar-Romero¹, A. Lara-Moreno^{1,2}, F. Madrid¹, J. Villaverde¹ ¹Institute of Natural Resources and Agrobiological of Seville (IRNAS), CSIC, Seville, Spain ²Dept of Microbiology and Parasitology, Faculty of Pharmacy, University of Seville, Seville, Spain

#47	ID 186	ACETAMINOPHEN BIODEGRADATION BY BACTERIAL STRAINS ISOLATED FROM ENRICHMENT CULTURES OF SEWAGE SLUDGE A. Vargas-Ordóñez, I. Aguilar-Romero, Esmeralda Morillo and J. Villaverde Institute of Natural Resources and Agrobiolgy of Seville (IRNAS), CSIC, Seville, Spain
Remediation of sites with Chlorinated Hydrocarbons		
#48	ID 117 21	NANOBIOREMEDIATION OF HEXACHLOROCYCLOHEXANES Jaroslav Semerád^{1,2}, O. Lhotský^{2,3}, and T. Cajthaml² ¹ Institute of Microbiology of the Czech Academy of Sciences, Prague, Czech Republic ² Institute for Environmental Studies, Faculty of Science, Charles University, Prague, Czech Republic ³ Dekonta As, Dřetovice 109, Stehelčevy, Czech Republic
Phytoremediation of heavy metals		
#49	ID 48	EFFECT OF MULTICONTAMINATED SOIL ON WATER RELATIONS OF <i>PTERIS CRETICA</i> Marie Lhotska¹, V. Zemanova², F. Hnilička¹ and D. Pavlikova² ¹ Dept of Botany and Plant Physiology, Faculty of Agrobiolgy, Food and Natural Resources, Czech University of Life Sciences Prague, Czech Republic ² Dept of Agroenvironmental Chemistry and Plant Nutrition, Faculty of Agrobiolgy, Food and Natural Resources, Czech University of Life Sciences Prague, Czech Republic
#50	ID 52	OPTIMIZING PHYTOMANAGEMENT STRATEGIES FOR A METAL (Cd, Pb, Zn, and Cu)-CONTAMINATED SOIL TO PROVIDE BIOMASS FOR CLEAN BIOFUEL PRODUCTION – PROGRESS FROM POT TRIAL Ofori-Agyemang Felix¹, Waterlot Christophe¹, Michel Mench², Oustrière Nadège¹ ¹ Univ. Lille, Institut Mines-Télécom, Univ. Artois, JUNIA, Laboratoire de Génie Civil et géo-Environnement, Lille, France ² Univ. Bordeaux, INRAE, UMR BIOGECO INRAE, F-33615 Pessac cedex, France
#51	ID 64	EXTRACTION OF AMMONIUM NICKEL SULFATE HEXAHYDRATE BY HYDROMETALLURGICAL PROCESS FROM THE HYPERACCUMULATING PLANT ODONTARRHENA CHALCIDICA – CASE STUDY FROM BULGARIA Violina Angelova Agricultural University of Plovdiv, Bulgaria
#52	ID 85	PRELIMINARY DATA ON THE PROSPECTS FOR THE USE OF <i>AMARANTHUS HYPOCHONDRIACUS</i> FOR SOIL PHYTOREMEDIATION FROM TOXIC TRACE ELEMENTS Svetlana Gorelova¹, O. Okina², I. Zinivovskaia^{3,4}, M. Gins^{5,6} ¹ Department of Biology, Natural Sciences Institute, Tula State University, Tula, Russia ² Laboratory of Chemical and Analytical Researches, Geological Institute of RAS, Moscow, Russia ³ Frank Laboratory of Neutron Physics, Joint Institute for Nuclear Research, Dubna, Russia ⁴ Horia Hulubei National Institute for R&D in Physics and Nuclear Engineering, Bucharest - Magurele, Romania ⁵ Peoples' Friendship University of Russia, Moscow, Russia ⁶ Federal Research Center for Vegetable Growing, Odintsovo, Moscow region, Russia
Constructed Wetlands & Phytoremediation of Organics		
#53	ID 102	INFLUENCE OF pH AND INOCULUM VOLUME IN CONSTRUCTED WETLANDS AT LABORATORY SCALE TO REMOVE CADMIUM FROM “LA ESPERANZA” ACID MINE DRAINAGE Lucia Ramos, Fernando Merino and Susana Gutierrez Microbiology and Microbial Biotechnology Laboratory, Biological Sciences Faculty, Universidad Nacional Mayor de San Marcos, Lima, Peru
#54	ID 79	COUPLING ACID MINE DRAINAGE TREATMENT AND BIOREMEDIATION OF ORGANIC BIOWASTE BY MEANS OF CONSTRUCTED WETLANDS Irene Acosta Hernández, H. Lizeth Medina-Díaz, Y. Delgado González, F.J. López- Bellido Garrido, D. Sánchez Ramos and J. Villaseñor Camacho Chemical Engineering Department, Research Institute for Chemical and Environmental Technologies (ITQUIMA), University of Castilla La Mancha UCLM, Ciudad Real, Spain
#55	ID 179	ESTIMATION OF NITROGEN FIXATION RATE IN A DUCKWEED LEMNA MINOR AQUA SYSTEM Ioanna Goudeli¹, Anestis Vlysidis^{1,2} ¹ School of Chemical Engineering, National Technical University of Athens, Greece ² School of Chemical & Environmental Engineering, Technical University of Crete, Chania, Greece

#56	ID 66	BACTERIAL COMMUNITIES STRUCTURE AND PCB-DEGRADING POPULATIONS RESPOND TO RHIZOREMEDIATION AS REVEALED BY DNA-SIP L. Vergani¹, F. Mapelli¹, M. Folkmanova², J. Papik², J. Jansa³, <u>Elisa Ghitti¹</u>, O. Uhlik² and S. Borin¹ ¹ Dept of Food, Environmental and Nutritional Sciences, University of Milan, Milan, Italy ² Dept of Biochemistry and Microbiology, University of Chemistry and Technology Prague, Czech Republic ³ Lab of Fungal Biology, Institute of Microbiology, Czech Academy of Sciences, Prague, Czech Republic
Phytoremediation of mixed contaminants		
#57	ID 27	BIOFORTIFIED AND CLIMATE-RESILIENT FOOD AND FODDER PRODUCTION ON MARGINAL AND CONTAMINATED SOILS <u>Michel Mench¹</u>, E. Loit², I. Keres², V. Povilaitis³, F. Rineau⁴, B. Rutkowska⁵, P. Schröder⁶, K. Tiideberg², W. Szulc⁵, R. Zydelis³ ¹ INRAE, BIOGECO, University of Bordeaux, Pessac, France ² Estonian University of Life Sciences, Crops Science and Plant Biology, Tartu, Estonia ³ Lithuanian Research Centre for Agriculture and Forestry, Kedainiai distr., Lithuania ⁴ Universiteit Hasselt, Environmental Biology, Hasselt, Belgium ⁵ Warsaw University of Life Sciences, Warsaw, Poland ⁶ Helmholtz Zentrum München, Deutsches Forschungszentrum für Gesundheit und Umwelt (GmbH), Neuherberg, Germany
#58	ID 99	NATURE BASED SOLUTIONS FOR RESTORING A MULTI-CONTAMINATED SOIL: A MICROCOSM STUDY WITH BRASSICA NAPUS <u>Valeria Ancona¹</u>, G. Aimola¹, A. Gatto¹, V.A. Lacirignola², D. Napolitano², P. Grenni³, G.L. Garbini³, D. Losacco¹, S. Convertini⁴, P.M. Carmignano⁴, V.F. Uricchio¹ and A.B. Caracciolo³ ¹ Water Research Institute, National Research Council (IRSA-CNR) Bari, Italy ² CISA SpA, Massafra (TA), Italy ³ Water Research Institute, National Research Council (IRSA-CNR) Montelibretti, Rome, Italy ⁴ ReAgri srl, Massafra (TA), Italy
#59	ID 148	THE DIVERSE PREDISPOSITION OF VARIOUS MACROPHYTE SPECIES FOR GROWTH IN THE HYBRID SEQUENTIAL BIOFILTRATION SYSTEM <u>Anna Wyrwicka-Drewniak¹</u>, Edyta Kiedrzyńska^{2,3}, Marcin Kiedrzyński⁴ and Patrycja Kopa¹ ¹ Dept of Plant Physiology and Biochemistry, University of Lodz, Poland ² European Regional Centre for Ecohydrology of the Polish Academy of Sciences, Lodz, Poland ³ UNESCO Chair Ecohydrology and Applied Ecology, University of Lodz, Poland ⁴ Dept of Biogeography Paleocology and Nature Conservation, University of Lodz, Poland
#60	ID 107	PGP ENDOPHYTIC BACTERIA AS RESOURCES FOR RHIZO-REMEDIATION OF PROTECTED AREAS AFFECTED BY PETROLEUM HYDROCARBONS Alice Melzi, Sarah Zecchin, <u>Martina Bertolini</u>, Lucia Cavalca Dept of Food, Environmental and Nutritional Sciences (DeFENS), Università degli Studi di Milano, Italy
#61	ID 138	RHIZOSPHERIC MICROBIOMES OF <i>AMARANTHUS</i> SPP. GROWN ON SOILS WITH DIFFERENT ANTHROPOGENIC POLYELEMENTAL ANOMALIES <u>Anna Muratova¹</u> and S. Gorelova² ¹ Institute of Biochemistry and Physiology of Plants and Microorganisms, Russian Academy of Sciences, Saratov, Russia ² Tula State University, Tula, Russia
#62	ID 180	BRIDGING THE GAP BETWEEN PHYTOREMEDIATION SOLUTIONS ON GROWING ENERGY CROPS ON CONTAMINATED LANDS AND CLEAN BIOFUEL PRODUCTION – THE GOLD PROJECT <u>Eleni G. Papazoglou¹</u>, M. Wójcik², J. Vangronsveld^{2,3}, N. Oustriere⁴, M. Mench⁵, W. Zegada-Lizarazu⁶, E. Alexopoulou⁷ ¹ Dept. of Crop Science, Agricultural University of Athens, Athens, Greece ² Dept. of Plant Physiology and Biophysics, Maria Curie-Skłodowska University, Lublin, Poland ³ Centre for Environmental Sciences, Hasselt University, Diepenbeek, Belgium ⁴ Institut Supérieur d'Agriculture, Yncréa Hauts-de-France, Lille Cedex, France ⁵ INRAE, BIOGECO, University of Bordeaux, Pessac, France ⁶ Dept. of Agricultural and Food Sciences, University of Bologna, Bologna, Italy ⁷ Centre for Renewable Energy Sources and Saving, Attika, Greece
Bioremediation of metals – bioleaching		

#63	ID 126	HEAVY METAL BIOSORPTION FROM AQUEOUS SOLUTIONS BY EPS-PRODUCING <i>SERRATIA PLYMUTHICA</i> STRAINS Rocco Zanetti, Milena Colombo, Sarah Zecchin, <u>Martina Bertolini</u>, Lucia Cavalca Department of Food, Environmental and Nutritional Sciences, University of Milan, Italy
#64	ID 183	BIOREMEDIATION OF METALLURGICAL SLAGS: INSIGHT FROM EXPERIMENTAL EXPOSURE TO BACTERIA, PLANTS AND ORGANIC EXTRACTS <u>Anna Potysz</u>¹, Artur Pędziwiatr², Jakub Kierczak¹, Sebastian Hedwig³ and Markus Lenz³ ¹ University of Wrocław, Institute of Geological Sciences, Wrocław, Poland ² Warsaw University of Life Sciences (SGGW), Faculty of Agriculture and Biology, Dept of Soil Environment Sciences, Warsaw, Poland ³ Institute for Ecopreneurship, School of Life Sciences, University of Applied Sciences and Arts Northwestern Switzerland, Switzerland