

**15<sup>TH</sup>, 16<sup>TH</sup>  
DECEMBER  
2022**



**11<sup>TH</sup> ANNUAL  
WORKSHOP OF  
YOUNG RESEARCHERS**

# SCHEDULE

## 15/12

**9:00 Imdea Energy: Current Status and Action Plan 2023. *David Serrano***

**9:30 1<sup>st</sup> predoc session. Chairs: Javier Dufour / Rebeca Marcilla**

<b>9:30</b>	CAMPOS CARRIEDO, FELIPE	Lessons learned from exploring the material criticality of two Fuel Cell and Hydrogen products
<b>9:37</b>	MORALES PALOMO, SERGIO	Zero to hero! Unraveling the secrets behind the adaptative evolution of <i>Yarrowia lypolitica</i> (•ONLINE)
<b>9:44</b>	PAGANO, MAURIZIO	Insights on the acetic acid pretreatment of wheat straw: benefits for the bio-oil production by pyrolysis
<b>9:51</b>	ALVÁN ARRASCÚE, DIEGO ARNOLD	Phenazine Conjugated Polymers: an effective design strategy for synthesis and electrochemical performance in acid and basic media
<b>9:58</b>	GARCÍA EQUIZABAL, ALEJANDRO	Transition metal doping of BiVO <sub>4</sub> for photoelectrochemical water splitting SU-101. A robust and efficient MOF for adsorption and photodegradation of EOCs in water
<b>10:05</b>	CHACÓN GARCÍA, ANTONIO J.	Battery Sizing and Location for Provision of Network Support Services (•ONLINE)
<b>10:12</b>	JANKOVIC, NJEGOS	Performance of different metal supported catalysts for tandem process: pyrolysis and hydrodehalogenation of WEEE plastic
<b>10:19</b>	AMODIO, LIDIA	Polycatechol and Conductive Polymer hybrids for All-Organic batteries
<b>10:26</b>	CÁMARA, OUSMANE	Magnetic composites of nanoMOFs and magnetic nanoparticles for drug delivery
<b>10:33</b>	PICCHI, DARINA FRANCESCA	All-Polymer symmetric deionization cell: a new concept for ion capture
<b>10:40</b>	FOMBONA PASCUAL, ALBA	

**10:47**



*Coffee break*

**2<sup>nd</sup> predoc session. Chairs: Patricia Horcajada / Freddy Oropeza**

<b>11:30</b>	GRIECO, REBECCA	Towards sustainable batteries: a new Aluminium-organic porous polymer battery
<b>11:37</b>	MAZUELO SANTOS, TANIA	New BOPHY-based Covalent Organic Framework for solar fuels production
<b>11:44</b>	RINCÓN LUCAS, IRENE	Metal-Organic Frameworks as a novel tool for water remediation
<b>11:51</b>	MOUVEVELIS, DIONYSIOS	Voltage profile improvement in distribution networks with distributed generation
<b>11:58</b>	DE LA CALLE PÉREZ, DANIEL	Performance of different dendritic zeolites in polyethylene cracking
<b>12:05</b>	SERRANO NIETO, RUBÉN	Novel Phosphonate Metal-Organic as catalyts
<b>12:12</b>	MIREHBAR, SEYEDKEYVAN	From battery to wastewater treatment: fury road
<b>12:19</b>	GONZÁLEZ DÍAZ, CARLOS	Activated carbons from different origin lignocellulosic residues to the removal of NO from polluted air


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# SCHEDULE

## 15/12

### 1<sup>st</sup> postdoc session. Chairs: Elia Tomas / Javier Feroso

12:30	CRUZ PRIETO, PEDRO LUIS	Conceptualization of an environmental dashboard to benchmark technical aspects in emerging technologies
12:45	NAVALPOTRO MOLINA, PAULA	Aqueous Membrane-Free Batteries: one step further
13:00	GÓMEZ MENDOZA, MIGUEL	Transient Absorption Spectroscopy as a valuable tool to investigate chemical processes
13:15	BIGLIONE, CATALINA	High proton conductivity of a novel Bismuth Phosphonate MOF
13:30	ALONSO GINER, ELENA	Tuning the properties of dendritic ZSM-5 zeolite synthesized by protozeolitic nanounits functionalization with amphiphilic organosilanes
13:45	BILDIRIR, HAKAN	Preparation of (Porous) Organic electrode materials for battery applications
14:00	FERNÁNDEZ RUIZ, CARLOS	Using MOFs for hydrogenation applications
14:15		 Lunch

### 2<sup>nd</sup> postdoc session. Chairs: Milan Prodanovic / Tania Hidalgo


15:30	PATIL, NAGARAJ	Polyimide organic electrodes for practical Li-ion batteries
15:45	NARANJO SÁNCHEZ, TERESA	Towards Artificial Photosynthesis: novel Covalent Organic Framework based on BODIPY
16:00	GRESES HUERTA, SILVIA	Warning indicators of microalgae anaerobic digestion failure
16:15	PINILLA, SERGIO	Additive manufacturing of Lithium-ion batteries
16:30	GARCÍA TECEDOR, MIGUEL	Novel photoelectrodes for Solar Fuels generation (•ONLINE)
16:45	CARRASCO GARRIDO, SERGIO	Hafnium-porphyrin MOF for CO <sub>2</sub> cycloadditions
17:00	ALONSO DONCEL, MARÍA DEL MAR	Unveiling the synthesis mechanism of dendritic ZSM-5 zeolites
17:15	HERRERO, ALEJANDRO	New processes for ammonia fixation

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# SCHEDULE

## 16/12

### 3<sup>rd</sup> predoc session. Chairs: José González / Mariam Barawi

9:00	D'SOUZA, DAVID	Pressurised gas receivers: from numerical predictions to experimental findings
9:07	LAGO CAMBEIRO, ADRIÁN	Reactor configuration role in volatile fatty acids production. Decoupling HRT and SRT
9:14	PEDRAZA GRANADO, EDUARDO	Development of a new aqueous Redox Flow Battery
9:21	PALENZUELA REBELLA, SANDRA	Nanostructured Conjugated Porous Polymers: to photoelectrocatalysis and beyond
9:28	LELOUCHE, SORRAYA	AuNP@MOF nanocomposite
9:35	RODRÍGUEZ ORTEGA, PABLO	Damping subsynchronous interactions in electrical distribution systems
9:42	LÓPEZ REGAÑA, JULIO	Circular Economy of real WEEE plastics: exploring the way of dehalogenation by catalytic pyrolysis using modified zeolites
9:49	SÁNCHEZ, GABRIEL	Promising materials for the removal of disinfection by-products in drinking water: Scale-up and prototype in pilot plant
10:00		 <i>Coffee break</i>

### 3<sup>rd</sup> postdoc session. Chairs: Patricia Pizarro/ Enrique G. Quismondo

10:30	SOUZA, ADRIANA	Dehydrogenation of propane to propylene over Pt and Ga MFI zeolites
10:45	RUIZ MARTÍNEZ, DÉBORA	Photo-rechargeable Solar Flow Batteries ( • ONLINE)
11:00	CARRAO DA CONCEIÇÃO, RICARDO	Automatic soiling assessment monitoring and cleaning techniques
11:15	VÁZQUEZ OVIEDO, ERICK I.	Stability Analysis of Limit Cycle Oscillators and Applications
11:30	CUETO NAREDO, JENNIFER	Different catalytic routes to convert wastes into valuable chemicals
11:45	ÁLVAREZ, INÉS	The VIRMOF tale: MOFs meet SARS-CoV-2 at IMDEA
12:00	<b>Voting for awards</b>	

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# POSTER

## Poster title

ABELLEIRA GONZÁLEZ, SANTIAGO	Modelling of microbial oil production from organic waste for environmental evaluation
MARTÍNEZ RAMÓN, NICOLÁS	Impact of new technologies in waste management systems
AFECTO GONÇALVES, MANUEL JOÃO	The use of mixed-culture anaerobic fermentation to transform wastes into added-value products
DE VICENTE MARTÍNEZ, MARTA	Adaptative evolution for high propionic and butyric acids consumption and lipid accumulation
GUTIÉRREZ LÓPEZ, GUILLERMO	Immune/chemo active nanoMOFs for pulmonary multitherapy against COVID19
AVENDAÑO CAIZA, MARCO VINICIO	Coordination of electrical generators and loads for providing auxiliary services in electrical distributions networks
DÍAZ GARCÍA, AINHOA	Hydrothermal liquefaction of microalgae
MURIEL OLAYA, MARÍA MILAGROS	Computational design of organic based redox flow batteries
MORTERA CANGA, ALICIA	Opportunities and challenges in integrating electrical engineering into long term energy planning