



UNIÓN EUROPEA  
Fondos Estructurales



## WORKSHOP

### LEADING EDGE TECHNOLOGIES FOR THE REMOVAL OF EMERGING POLLUTANTS

November, 24<sup>th</sup> (2016) Rey Juan Carlos University. Experimental Sciences and technologies School.  
Mostoles (Madrid, Spain)

08.30h-Reception and Wellcome

#### KEYNOTE Session

- 09.00h- Ecological risk of pharmaceuticals in the aquatic environment -  
*Marco Vighi. IMDEA-AGUA (Alcalá de Henares, Madrid, Spain)*
- 09.25h-Catalytic wet peroxide oxidation in the removal of emerging micropollutants  
*Helder Gomes del Instituto Politécnico de Bragança (Portugal)*
- 9.50h- Advanced Oxidation Processes application in the treatment of agro-industrial wastewater  
*Prof. José Alcides Silvestre Peres. Universidad de Trás os-Montes e alto Douro (Vila Real, Portugal)*
- 10.15h- Revisiting microalgae-based processes for a cost-effective and integral wastewater treatment  
*Raúl Muñoz. Universidad de Valladolid (Spain)*
- 10.40h- Microplastics in the marine environment  
*Jesús Manuel Gago Piñeiro, Instituto Español de Oceanografía (Vigo, Spain)*

#### 11.00 - 11:30h - COFFEE-BREAK POSTER SESSION

##### Advanced oxidation processes for the removal of emerging pharmaceutical pollutants

- 11:30h-Ozone, Solar Radiation and Catalysts to remove water contaminants  
*Fernando Juan Beltrán Novillo (UNEX)*
- 11:45h-Degradation route of sulfadimethoxine by CWPO-Photoassisted with ilmenite  
*Patricia García Muñoz, Universidad Autónoma de Madrid.*
- 12:00-Electro activation of persulfate using iron electrode. The role of the operating conditions  
*Jefferson Eduardo Silveira, Universidad Autónoma de Madrid.*
- 12:15h-Degradation of representative pharmaceuticals in different water matrices by catalytic wet peroxide oxidation (CWPO)  
*Macarena Muñoz García, Universidad Autónoma de Madrid.*

### Biodegradation of emerging pharmaceutical pollutants and disinfection

- 12:30h-Potential biodegradation of pharmaceuticals and biomass valorization of *Trametes versicolor* for the treatment of a real urban wastewater  
*Ana Cruz del Álamo, Universidad Rey Juan Carlos.*
- 12:45h-Comparison of photocatalytic chemical oxidation and bacterial inactivation by using a fluorescent UV-A light and different LED-based systems  
*Miguel Martín Somer, Universidad Rey Juan Carlos.*
- 13.00h Microbial community composition in reverse osmosis membranes used in desalination plants  
*Sergio Martínez-Campos Gutiérrez. Universidad de Alcalá.*

**13:15 -15:30h - LUNCH**

**15.00 - 15:30h - POSTER SESSION**

### Physical separation processes for removal of emerging pharmaceutical pollutants

- 15:30h-Synthesis of activated carbons from pine sawdust for nonsteroidal anti-inflammatory drugs adsorption  
*Silvia Álvarez Torrellas, Universidad Complutense de Madrid.*
- 15:45h-Adsorption of wastewater micropollutants on inorganic nanoparticles  
*Idoia Martín de Lucía Ramos, Universidad de Alcalá.*
- 16.00h- Removal of cobalt from wastewater using clinoptilolite as adsorbent  
*Patricia Sáez González, Universidad Complutense de Madrid.*
- 16:15h-Comparative study of commercial, recycled and modified nanofiltration and ultrafiltration membranes for removal of pharmaceutical compounds.  
*Amaia Ortiz de Lejarazu Larrañaga, IMDEA-Agua*

### Combination of treatments and techno-economical assessments

- 16:30h-Removal of arsenic from aqueous system using TiO<sub>2</sub>, ZVI, n-ZVI and TiO<sub>2</sub> + ZVI and TiO<sub>2</sub> + n-ZVI  
*Julia María Ráez Tajuelo, Universidad Rey Juan Carlos.*
- 16:45h-Technoeconomical assesment of intensive Fenton process and coupling of mild Fenton process and sequential biological process for a pharmaceutica wastewater  
*Iván Rodriguez Hernández. Universidad Rey Juan Carlos.*

## Evaluation of ecotoxicity of emerging pollutants

- 17:00h-Human pharmaceutical compounds: the side effects of medication on aquatic species  
*Andrea Castaño Sánchez. IMDEA-Agua*
- 17:15h-Accredited Toxicity Bioassays as a Tool for the Assessment and Validation of New Water Treatment Technologies  
*Myriam Catalá Rodríguez, Instituto de salud Carlos III - Centro Nacional de Sanidad Ambiental. Área de Toxicología Ambiental.*

**17.30 - 19:00h - Visit to Bruker laboratory and wastewater treatment pilot plant at URJC**

**19:00h - CLOSING REMARKS**