



COST ACTION GREENERING – DATA COLLECTION

First name, Family Name: Francisco Javier, Yuste Córdoba

Type (Academic or Industrial): Academic

Country: Spain

Working Group in which you are involved: 1

E-mail: francisco.yuste@juntaex.es

Laboratory/Company: Centro de Investigaciones Científicas y Tecnológicas de Extremadura (CICYTEX). Instituto del Corcho, la Madera y el Carbón Vegetal (ICMC). C/Pamplona 64. 06800 Mérida, (Badajoz).

Laboratory/Company info (limited to 400 characters):

The Institute for Cork, Wood and Charcoal (ICMC) is a R&D center within the Centre for Scientific and Technological Research of Extremadura (CICYTEX), Spain. It offers technical support to stakeholders, companies and entrepreneurs of the “Dehesa” (agrosilvopastoral land use system), including management of R&D projects concerning applications of green chemistry to factories and processes.

Link to the home page of the Laboratory/Company: <http://cicytex.juntaex.es/centros/icmc>

Fields of expertise (limited to 400 characters):

- Advanced analytical techniques: SPME, GC/MS-MS, HPLC.
- Recovery of by-products from agriculture wastes.
- Use of innovative techniques to treat agriculture wastes: foto-Phenton, sonication.
- Management of research projects concerning advanced valorisation of agriculture wastes and implementation of green chemistry.

5 Main publications or patents:

- I. Oller, A. Agüera, M.J. Trinidad-Lozano, F.J. Yuste, S. Malato, L.A. Perez-Estrada. “Application of a multivariate analysis method for non-target screening detection of persistent transformation products during the cork boiling wastewater treatment”. *Science of the Total Environment*, 633: 508-517.
- Zhilin Wu, Francisco J. Yuste-Córdoba, Pedro Cintas, Zhansheng Wu, Luisa Boffa, Stefano Mantegna, Giancarlo Cravotto. “Effects of ultrasonic and hydrodynamic cavitation on the treatment of cork wastewater by flocculation and Fenton processes”. *Ultrasonic-Sonochemistry*, 40-B: 3-8.
- Mehrdad Arshadi, Thomas M. Attard, Rafal M. Lukasik, Mladen Brncic, André M. da Costa Lopes, Michael Finell, Paul Geladi, Lia Noemi Gerschenson, Fahrettin Gogus, Miguel Herrero, Andrew J. Hunt, Elena Ibáñez, Birgit Kamm, Inmaculada Mateos-Aparicio, Ana Matias, Nikolaos E. Mavroudis, Enzo Montoneri, Ana Rita C. Morais, Calle Nilsson, Emmanouil H. Papaioannou, Aurore Richel, Pilar Rupérez, Biljana Škrbić, Marija Bodroža Solarov, Jaroslava Švarc-Gajić, Keith W. Waldron, F. J. Yuste-Córdoba. “Pre-treatment and extraction techniques for recovery of added value



compounds from wastes throughout the agri-food chain". *Green Chem.*, 2016,18, 6160-6204.

- L. Ponce-Robles, S. Miralles-Cuevas, I. Oller, A. Agüera, M. J. Trinidad-Lozano, F. J. Yuste, S. Malato. "Cork boiling wastewater treatment and reuse through combination of advanced oxidation technologies". *Environ Sci Pollut Res Int.*, 2017 Mar;24(7):6317-6328.
- E. De Torres-Socías, A. Cabrera-Reina, M. J. Trinidad, F. J. Yuste, I. Oller, S. Malato. "Dynamic modelling for cork boiling wastewater treatment at pilot plant scale". *Environmental Science and Pollution Research* November 2014, Volume 21, Issue 21, pp 12182-12189.

Collaborations:

- University of Extremadura (Spain).
- CELIEGE (European Cork Confederation)
- ISO (International Organization for Standardization).
- Universidad Complutense de Madrid, (Spain)
- IPP, Portalegre (Portugal)
- CEBAL, Beja (Portugal).

Facilities:

- HPLC-DAD/UV
- SPME-GC-ECD
- SPME-GC-MS/MS
- Espectroscopy UV-VIS
- Preparative LC System.