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## **COST ACTION GREENERING – DATA COLLECTION**

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**First name, Family Name:** Ana, Ballesteros Gómez

**Type (Academic or Industrial):** Academic

**Country:** Spain

**Leadership position in the COST:** MC substitute on CA18224

**Working Group in which you are involved:** WG1 and WG3

**E-mail:** ana.ballesteros@uco.es

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**Laboratory/Company:** Department of Analytical Chemistry of the University of Córdoba (research group FQM186), University Institute of Nanochemistry (IUNAN)

**Laboratory/Company info:**

Personnel: 4 professors, 4-6 PhD students, 2 postdocs, ~4-5 bachelor or technician training internships/year, ~2-3 exchange PhD students/year. The group works in close collaboration (research and education activities) with the other five groups of the Department (personnel 13-14 professors, > 20 PhD students > 10 postdocs) and with IUNAN, constituted by 15 groups from different chemistry disciplines with expertise in nanomaterials.

**Link to the home page of the Laboratory/Company:**

<http://www.uco.es/iunan/index.php>

<http://www.uco.es/sac/index.html>

**Fields of expertise:**

- Development of green solvents (supramolecular solvents)
- Nanomaterials (development and characterization)
- Analytical method development, chemical analysis, antioxidant potential
- Waste valorization (recovery, stabilization of bioactives)
- Emerging contaminants and human exposure
- Wastewater treatment

**5 Main publications or patents:**

- Carotenoid extraction from microalgae with nanostructured liquids with restricted access properties. Patent, 2018
- L.S. Torres-Valenzuela, A. Ballesteros-Gómez, S. Rubio. *Valorization of spent coffee grounds by supramolecular solvent extraction*. Sep. Purif. Technol. 228 (2019) 115759
- A. Ballesteros-Gómez, N. Caballero-Casero, S. García-Fonseca, L. Lunar, S. Rubio. *Multifunctional vesicular coacervates as engineered supramolecular solvents for wastewater treatment*. Chemosphere 223 (2019) 569-576.
- M.K. Björnsdotter, W. Jonker, J. Legradi, J. Kool, A. Ballesteros-Gómez. *Bisphenol A alternatives in thermal paper from the Netherlands, Spain, Sweden and Norway. Screening and potential toxicity*. Sci. Total Environm. 601-602 (2017) 210-221.
- A. Ballesteros-Gómez, J. Ballesteros, X. Ortiz, W. Jonker, R. Helmus, K. Jobst, J.R. Parsons, E.J. Reiner. *Identification of Novel Brominated Compounds in Flame*



*Retarded Plastics Containing TBBPA by Combining Isotope Pattern and Mass Defect Cluster Analysis.* Environ. Sci. Technol.51 (2017) 1518–1526.

**Collaborations:**

- Lab. Bio-Ingenierie des Polymeres Cardiovasculaires, Université Paris; Toxicological Centre (University of Antwerp); IBED (University of Amsterdam); Department Chemistry and Biology NTNU (Trondheim), several food related companies located in Andalusia and Badajoz (South Spain)

**Facilities:**

- Techniques for characterization of nanomaterials (AF4, microwave synthesis, nanoparticle Tracking Analysis, DLS, GPC, XFR, porosimeter, etc.)
- Analysis techniques: LC-DAD, LC-MS/MS, LC-IMS-QTOF, 2LC-QTOF, GC-MS
- Sample extraction and preparation