COST ACTION GREENERING – DATA COLLECTION

First name, Family Name: Esther Rincón
Type (Academic or Industrial): Academic
Country: Spain
Leadership position in the COST: Participant on CA18224
Working Group in which you are involved: WG1
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Laboratory/Company: Department of Inorganic Chemistry and Chemical Engineering, University of Córdoba, Córdoba, Spain. Department of Organic Chemistry, University of Córdoba, Córdoba, Spain.

Laboratory/Company info:
RNM-271 is a research group of the Department of Inorganic Chemistry and Chemical Engineering at University of Córdoba (UCO) which operates in close collaboration with other laboratories of the university. Personnel: 8 researchers and leading researchers, 5 PhD students, 3 postdoctoral researchers.
FQM-383 is a research group of the Department of Organic Chemistry at UCO. This research group has an excellent research record thanks to numerous collaborations. Personnel: 5 researchers and leading researchers, 6 PhD students, 2 postdoctoral researchers.

Link to the home page of the Laboratory/Company:
https://sites.google.com/site/rnm271/home
https://www.uco.es/~q62alsor/

Fields of expertise:
- Heterogeneous catalysis (synthesis, characterization and catalytic activities of nanomaterials)
- Mechanochemistry (synthesis of nanomaterials; phenolic compounds extraction)
- Development and characterization of films for food active packaging
- Bio-based composite materials
- Biorefinery
- Residues (mainly agricultural and agro-food wastes) valorisation into high added value products

5 Main publications or patents:
- Rincon, E., García, A., Romero, A.A.; Serrano, L., Luque, R. and Balu, A.M. Mechanochemical Preparation of Novel Polysaccharide-Supported Nb_2O_5 Catalysts. *Catalysts* **2019**, 9, 38. doi:10.3390/catal9010038
- Rincon, E., Serrano, L., Balu, A.M., Aguilar, J.J., Luque, R., and García, A. Effect of Bay Leaves Essential Oil Concentration on the Properties of Biodegradable Carboxymethyl Cellulose-Based Edible Films. *Materials* **2019**, 12, 2356. doi:10.3390/ma12152356
- Rincon, E., Balu, A.M., Luque, R., and Serrano, L. Mechanochemical extraction of antioxidant phenolic compounds from Mediterranean and medicinal Laurus nobilis: A

comparative study with other traditional and green novel techniques. *Industrial Crops and Products* 2019, 141, 111805. https://doi.org/10.1016/j.indcrop.2019.111805

Collaborations:

Numerous collaborations with leading academic, research and industrial partners across the EU and worldwide. This list includes KTH (Sweden), PLAPIQUI (Argentina), CTP (France) and CIPA (Chile).

Facilities:

- Bio-based materials and nanomaterials characterization (DRX, SEM, TEM, DLS…).
- MW equipment (synthesis of nanocatalysts, catalytic reactions, extraction of natural compounds).
- Ball mill for mechanochemical synthesis of nanomaterials or natural compounds extraction.
- Different reactors for biorefinery processes
- Laboratory equipment for the physical and mechanical characterization of bio-based materials, composites, films, foams…)