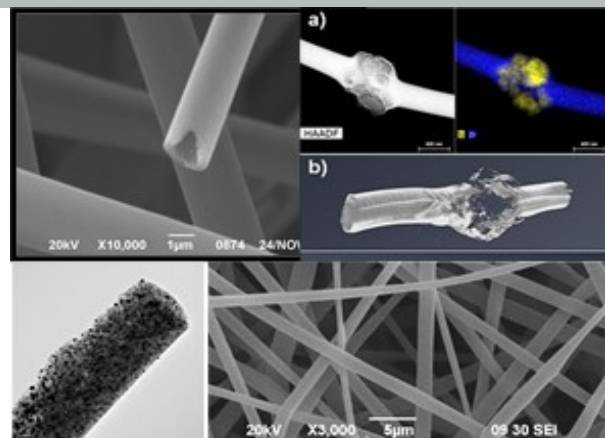




## WASTE AND ENVIRONMENTAL TECHNOLOGY



### INTRODUCTION

This research group has extensive experience in the use of lignocellulosic waste as raw material for the preparation of carbonaceous materials of industrial and/or environmental interest, through thermochemical processes. Likewise, the group has been directing its scientific activity towards the most avant-garde challenges in the field of energy sustainability through the development of catalysts of biomass origin for reactions of interest in the field of biorefinery.

### RESEARCH TOPICS

- Thermochemical use (catalyzed and non-catalyzed) of biomass and industrial waste for its revaluation.
- Design and preparation of carbonaceous, metallic and metal oxide based electrodes for electrocatalytic and energy storage processes.
- Development of catalytic systems from lignocellulosic waste for the production of chemical compounds of industrial interest (Biorefinery).
- Adsorption and heterogeneous catalysis processes for the reduction and/or elimination of contaminating compounds from liquid or gaseous effluents.

### SCIENTIFIC-TECHNICAL SERVICES

- Preparation and characterization of nanostructured carbon materials, activated carbons and molecular sieves.
- Preparation and characterization of submicron-sized mass and hollow fibers and spheres. Electrospinning and electrospraying techniques.
- Preparation and characterization of inorganic materials for application in the fields of catalysis, environment and energy.
- Elimination of gaseous pollutants and liquids .
- Characterization, study and analysis of the deactivation of catalysts.
- Study of pyrolysis and gasification of agroforestry and industrial waste for energy revaluation.

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