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TITLE:	Porous Silica Aerogels and Electrospun Membranes For Next-Generation Water Remediation
Abstract (250-400 words)	
This seminar will present recent advances in water remediation using advanced porous materials. I will first give an overview of strategies for removing emerging contaminants, and also I will present few inpiring results using electrospun based membranes, but also exploring a new potential route using porous silica hydro/aerogels for water decontamination applications. Finally, I will show how combining silica aerogels with electrospun membranes would be potential candidates to efficient removal of PFAS and other persistent pollutants from water.	

## Short CV

I AM AN EXPERIMENTAL PHYSICIST WITH A DIVERSE ACADEMIC JOURNEY. I OBTAINED MY PHD THROUGH A COTUTELLE PROGRAM BETWEEN THE UNIVERSITÉ DE MONTPELLIER (FRANCE) AND THE UNIVERSIDAD CENTRAL DE VENEZUELA (VENEZUELA). OVER THE YEARS, I'VE ENGAGED IN TEACHING AND RESEARCH AT VARIOUS INSTITUTIONS, INCLUDING THE UNIVERSIDAD CENTRAL DE VENEZUELA, THE INSTITUTO VENEZOLANO DE INVESTIGACIONES CIENTÍFICAS, POLYTECH IN MONTPELLIER (FRANCE), UNIVERSITÉ DE BORDEAUX (FRANCE), YACHAY TECH UNIVERSITY (ECUADOR) AND THE UNIVERSIDAD CATÓLICA DE MURCIA (UCAM, SPAIN). SINCE 2018-2024, I HAVE BEEN AN INVITED RESEARCHER AT THE RESEARCH GROUP 'PROPIEDADES MECÁNICAS, PROCESADO Y MODELIZACIÓN DE CERÁMICAS AVANZADAS' AT THE UNIVERSIDAD DE SEVILLA (SPAIN). IN SEPTEMBER 2024, I JOINED UNIVERSIDAD ALFONSO X EL SABIO (UAX) IN SPAIN AS A FULL-TIME SENIOR RESEARCHER AND TEACHING AND RESEARCH STAFF (PDI) MEMBER AT THE ESCUELA DE INGENIERÍA, ARQUITECTURA Y DISEÑO (EIAD). I ALSO ASSUMED THE ROLE OF HEAD





OF THE BIOENGINEERING & REGENERATIVE MEDICINE (BIOREM) RESEARCH GROUP AND CURRENTLY SERVE AS THE RESEARCH COORDINATOR FOR THE EIAD FACULTY.

MY RESEARCH FOCUSES PRIMARILY ON THE SYNTHESIS OF CUSTOMIZED ORGANIC/INORGANIC NANOMATERIALS AND BIOMATERIALS, LEVERAGING NANOCARBON AND NANOPARTICLES. I BRING EXTENSIVE EXPERIENCE IN EXPERIMENTAL TECHNIQUES FOR MATERIAL CHARACTERIZATION, INCLUDING RAMAN, UV-VIS, FTIR, AND XPS SPECTROSCOPIES, AS WELL AS ELECTRON MICROSCOPY. ADDITIONALLY, I STUDY THE MECHANICAL PROPERTIES AND NANO/MICROSTRUCTURE OF MATERIALS. ALSO, STUDY THEIR BIOCOMPATIBILITY VIA MICROBIOLOGY AND CELL CULTURE WITH DIFFERENT CELL LINES.

THROUGHOUT MY CAREER, I'VE SUPERVISED NUMEROUS UNDERGRADUATE AND DOCTORAL THESES AND CO-AUTHORED OVER FOURTY FIVE ARTICLES AND BOOK CHAPTERS RELATED TO MATERIALS SCIENCE, NANOMATERIALS, AND BIOMATERIALS. FURTHERMORE, I'VE ACTIVELY CONTRIBUTED AS A PRINCIPAL INVESTIGATOR AND COLLABORATIVE RESEARCHER IN MORE THAN TWELVE NATIONAL, EUROPEAN, AND INTERNATIONAL COMPETITIVE PROJECTS.