

## **Roberto Boada**

My research career has been focused on using X-ray spectroscopy characterization techniques for studying electronic, chemical, and structural properties of different systems in areas ranging from magnetism to environmental chemistry. Over the years, in order to achieve a more comprehensive understanding of the phenomena occurring at the molecular scale, I have complemented my expertise as experimentalist with computation skills for performing *ab-initio* calculations based on multiple-scattering theory for simulating the X-ray absorption near edge structure (XANES) region of the spectra.

For my PhD Thesis, I studied the magnetic polarization of non-magnetic atoms in rare-earth–transition metal (R-T) intermetallic alloys by means of X-ray magnetic circular dichroism (XMCD). In addition, my stays at the BL39XU beamline of SPring-8 synchrotron (Japan) during my PhD gave me the opportunity to learn about controlling the X-ray polarization using phase plates and the instrumentation required for performing XMCD measurements. After getting my PhD in Physics in 2011, I joined the I20 beamline at Diamond Light Source (DLS) synchrotron facility (United Kingdom). I studied the interaction of gas/solvent molecules with metal centres in metal organic frameworks (MOFs) with X-ray spectroscopy techniques. In 2017, I was awarded a Marie Skłodowska-Curie Action cofund fellowship for joining the Chemistry Department of the University Autònoma of Barcelona (Spain). Since then, I have been working on using synchrotron characterization methodologies for performing chemical speciation on materials related with environmental technologies, food science and health.