

<b>Call reference number</b>	(2025-05)
<b>Call name</b>	Post-doctoral researcher on molecular qubits
<b>Application Deadline</b>	2025/04/20

<b>Introduction and main description</b>
<p>BCMaterials is searching for a motivated and experienced Postdoctoral Researcher to (a) develop a deeper fundamental and practical understanding of molecular qubits for quantum technologies and (b) enhance the robustness and scalability of molecular qubits to facilitate their real-world deployment. For such purpose, the postdoctoral researcher will synthesize novel MOFs that behave as qubits and will determine their spin dynamics, including spin-lattice relaxation and quantum coherence times. The most promising molecular qubits will be exfoliated and deposited onto surfaces, which will allow to assess their functionality in the environment in which they will be used for quantum technologies.</p> <p>This post-doctoral position is to work in the Clockbits project, funded by the Ministerio de Ciencia, Investigación y Universidades and AEI under the Consolidación Investigadora program. The project funding will end on 31/03/2027.</p>

<b>Skills and Requirements</b>
<p>PhD in Physics, Chemistry, Materials Science or related areas.        Demonstrated experience in any of the following fields: synthesis and characterization of coordination compounds and/or polyoxometalates, study of single-molecule magnets or molecular qubits.        Experience in the exfoliation of 2D coordination complexes and pulse EPR measurements will be valorized.        A team player who can collaborate with other research groups.        Demonstrated ability in technical writing for technical reports, scientific publications, and presentations.        Excellent communication skills in English.</p>

<b>Work Program / Duties / Responsibilities</b>
<ol style="list-style-type: none"> <li>1. Synthesis of 2D molecular qubits.</li> <li>2. Physicochemical characterization and investigation of the spin dynamics.</li> <li>3. Exfoliation of the extended systems and deposition on surfaces.</li> <li>4. Characterization of the functional surfaces and investigation of the spin dynamics.</li> </ol>

<b>Application Procedure</b>
<p>Apply by submitting a motivation letter and a CV (in English) using the "Contact" button at the corresponding offer, at the "Join Us" area on BCMaterials' portal (<a href="https://www.bcmaterials.net/join-us">https://www.bcmaterials.net/join-us</a>).</p> <p>Your name and email address will be required for further contact too.</p>

**Other Relevant Information**

We provide a highly stimulating environment with state-of-the-art infrastructures, and unique professional career development opportunities. We offer and promote a diverse and inclusive environment and welcomes applicants regardless of age, disability, gender, nationality, ethnicity, religion, sexual orientation or gender identity.