

JOB OFFER

PhD Researcher

Position: PhD researcher. Development of High-Temperature Molten Salt Thermal Energy Storage Systems.

Offer date: DOE Publication

Project: CIIAE – Ref. PD-SALES FUNDIDAS (ALMACENAMIENTO DE ENERGÍA TÉRMICA)

Department: Thermal Energy Storage

Estimated starting date: First quarter of 2024

Workplace:	Universidad de Extremadura. Campus de Cáceres	
Tasks to be developed:	<p>Molten salts are ionic compounds, in solid state at room temperature and atmospheric pressure, that melt when heated above their melting temperature. In the liquid phase, these salts have high volumetric heat capacities, which is why they allow a lot of heat to be stored while occupying the minimum amount of physical space and being easy to transport. Sensible heat storage with molten salt is a very mature and commercially proven technology. The greatest challenge of this technology is to improve the chemical compatibility between the salts and the tanks or components in contact with them to reduce corrosion problems.</p> <p>The selected candidate must perform the following tasks:</p> <ul style="list-style-type: none"> • Carry out an exhaustive review of the state of the art of the assigned storage topic. • Characterization of thermophysical tests for the evaluation of materials for thermal storage with molten salts. • Carrying out experimental tests in pilot plants or reactors belonging to own or external facilities used for the storage of thermal energy, in accordance with the assigned topic. • Interdisciplinary collaboration with colleagues from the CIIAE, and other national and international institutions. • Preparation of technical and dissemination presentations. • Writing scientific publications and presenting results at international conferences. 	
Duration of the contract and salary:	Fixed-term contract. End: September 2025. Possibility of extension.	Gross Salary: 19065,34 €
Academic background required:	<p>Bachelor's degree or degree in Physics, Chemistry, Chemical Engineering, Materials Science, Mechanical, Electrical or Electronic Engineering or related field Be able to access a doctoral program</p> <p>Note: Candidates about to finish the master (or equivalent degree that guarantee access to the PhD program) can submit the application. The grade certificate will be required by the time of signing the contract.</p>	
Other education:	<p>Preferred Master's Degrees:</p> <ul style="list-style-type: none"> • Materials for Energy Storage and Conversion • Chemical, Mechanical, Electrical, or Related Engineering • Materials Science or Related Fields • Structural Integrity and Durability of Materials, Components, and Structures • Solar Energy 	
Professional experience:	Not required	

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Requirements for the position:	Specific techniques (analytics, software, calculations, prototyping, etc.)	<ul style="list-style-type: none"> Office tools
	Participation and/or collaboration in R&D&I/business projects	Not required
	Languages	English. To evaluate Spanish and/or Portuguese
	Transversal skills	<ul style="list-style-type: none"> Committed and responsible Ability to work as a team Own initiative Perseverance with the search results.
	Availability to travel and stay abroad	The position offered requires occasional participation in events outside Extremadura
	Publications: scientific articles (in journals indexed in Web of Science and/or Scopus), theses (PhD and/or master's), presentations at conferences, reports, technical reports, technical guides, etc.	Not required

To Rate:

- Motivation Letter: Please describe the skills that make you the ideal candidate for this PhD position.
- Awards, mentions, scholarships or other achievements
- Reference letters: Include two reference letters (from employers and/or professors, with their contact information, email and telephone number) that highlight the technical and transversal qualities that have been identified in the candidate and that are relevant for the position.
- Having completed specific training courses (for example, in molten salts, thermal storage, thermophysical properties DSC, TGA, etc.). Not mandatory.
- Laboratory experience. Not mandatory.
- Experience in modeling/simulations. Not mandatory.
- Having actively participated in the publication of articles in indexed journals, as well as participation in research conferences. Not mandatory.

Note: To facilitate the evaluation, it is recommended to include a list or table that breaks down the merits that the candidate considers should be evaluated for each of the requirements

Selection process:

TECHNIQUES: Oral knowledge test YES NO

LANGUAGE: ORAL YES NO (**To be evaluated during the interview**)

JOB INTERVIEW: YES NO

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Interested candidates

Please, send all the documents requested by the terms and conditions of the call for proposals, together with all the documents requested by this job offer, and the Application Form. Deadline is 15 calendar days from the day following the publication in the CIAE web, and indicating the following reference: **Ref. PD-SALES FUNDIDAS (ALMACENAMIENTO DE ENERGÍA TÉRMICA)** to:

FUNDECYT-PCTEX (Edificio Parque Científico Tecnológico), Avda. de la Investigación, s/n – Edificio PCTEX, Campus de la Universidad de Extremadura - 06006 Badajoz (Spain)

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