JOB OFFER

JUNIOR RESEARCHER

Position: Junior Researcher. Thermal storage systems integration.
Offer date: WEB publication
Project: CIIAE -Refª IJ2-INTEGRACIÓN (ALMACENAMIENTO DE ENERGÍA TÉRMICA)
Department: Thermal Energy Storage
Estimated starting date: 2023

Workplace:	University of Extremadura. Cáceres campus.	
Tasks to be developed:	Although, it is possible to find in the literature the description of optimal materials for applications in thermal storage systems, the implementation of such materials in industrial systems is limited, due to the complexity of developing suitable interfaces between the source and the receiver. The selected candidate must develop the following tasks: - Development of new strategies for the design and integration of thermal storage systems in industrial applications. - Design heat exchangers that allow the heat transfer rate to be the necessary to absorb the excess heat (or cold) available and in which it will be possible to return this heat for specific applications. - Acquisition of competitive funding, both private and public. - Close interdisciplinary collaboration with CIIAE colleagues. As well as collaboration with universities, research institutes and companies at national and international level. - Support, supervision and mentoring of doctoral students and master´s students. - Writing of scientific publications and presentation of results at international conferences. <u>Challenges</u>: - Increase the load transfer rate. - Development of customized designs of thermal storage systems depending on source and receiver.	
Duration of the contract and salary (per annum):	Fixed-term contract. End: September 2025. Possibility of extension.	Gross Salary 35 000 € - 38 000 €
Academic background required:	A PhD in Mechanical Engineering, Chemical Engineering, Physics Engineering, Materials Science, Physics, Chemistry, or similar.	
Other education:	Valuable master's degree in: - Materials for Energy Storage and energy conversion - Thermal machines - Chemistry/mechanical/physic engineering - Materials science - Physics - Advanced industrial processes - Renewable energies and energy efficiency	
Professional experience:	Post-doctoral experience not required	
Job requirements (have to be fulfilled):	**Specific techniques (analytical, software, calculations, prototyping, etc.)**	– Valuable demonstrated competence in the design of thermal storage systems based on sensible or latent heat (phase change materials). – Valuable experience in fluid dynamics, process design, simulation, energy and mass transfer balances.

	Participation and/or collaboration in R&D&I/business projects	Valuable proven experience in the participation and/or collaboration of R&D projects
	Languages	English. Valuable: Spanish and Portuguese.
	Cross-cutting competences	– Communication skills – Ability work in a team – Experience in collaborations inside and outside the own department
	Willingness to travel and stay abroad	This position requires occasional participation in events outside of 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.	Solid publication record in scientific journals. It will be valued the number and relevance of scientific publications/congresses related to the position main topic.

To be evaluated (adds points to the final evaluation)

- Motivation letter: Include a motivation letter describing the qualities that the candidate considers suitable for the position, as well as some general objectives of the research that he/she would like to develop at CIIAE.
- Reference letters: Include two professional reference letters (from employers and/or professors, with their contact information, email and phone) highlighting the technical and transversal qualities that they have identified in the candidate and that are relevant to the position.
- Research projects: Include a regional/national or international projects list in which the candidate has participated.
- Writing proposals for competitive calls experience (even if no funding has been obtained, in this case, please attach the evaluation letter).
- Being the first author or the corresponding author in scientific articles
- Having obtained competitive research contracts, such as Torres Quevedo, Juan de la Cierva, Ramón y Cajal, Marie Sklodowska Curie, or equivalent
- Have been principal investigator in R&D projects.
- Demonstrated experience in supervising work teams.
- Have supervised bachelor´s final projects, master´s final projects or PhD.
- First author or corresponding author in scientific articles.
- Experience in the study of heat transfer performance and heat transfer improvement method.
- Have completed specific training courses, relevant to the position offered (e.g. in molten slats, thermal storage, etc.)
- Experience in scaling from laboratory to prototypes.
- Experience in modelling/simulations (Comsol, CFD, etc.).
- Experience in industrial collaborations and/or previous experience working in industry.
- Patents.
- Awards, mentions or other achievements

Note: To facilitate the evaluation process, it is recommended to include a list or table, itemizing the merits you consider that should be evaluated for each of the requirements (Ex: Requirement: Experience in thermal analysis. Candidate: brief description of experience in thermal analysis reflected in scientific articles, theses, courses, projects, etc.)

TECHNIQUES: Oral knowledge test YES ☐ NO X

LANGUAGE: ORAL YES X NO ☐
It will be evaluated during the interview.

JOB INTERVIEW: YES X NO ☐

Interested candidates

Please send all the documentation required in THE CONDITIONS OF THE CALL and THE JOB OFFER, no later than 15 calendar days from the day after publication on the WEB, indicating: **IJ2-INTEGRACIÓN (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)

Email: ciiae.personal@fundecyt-pctex.es Phone number: +34 924 014 594

www.fundecyt-pctex.es

www.ciiae.org