GOBIERNO DE ESPAÑA MINISTERIO DE CIENCIA, INNOVACIÓN Y UNIVERSIDADES

CDTI INNOVACIÓN

Search for a Spanish Partner for a Bilateral R&D Project

Organization	
Date of Request:	September 30th, 2025
Company name:	Suez University
Contact person and title/ designation:	Dr. Walaa Omar
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SECTION 1: Entity launching the partner search *(Please give brief / to the point explanations. For more explanation on any point below, you may add a short paragraph as an annexure, with this document.)*	
Sector	University (Suez University) Teaching and research entity (Academic)
Entity mission or core functions	Undergraduate and postgraduate programs, Research and national and international collaborations
Date of establishment	2012
Ownership (if public and traded, add stock exchange and ticker symbol)	Faculty of Engineering – Suez University
Total number of employees	150
Number of employees in R&D	60
Key products sold or services provided	- Academic programs for undergraduates and postgraduates. - Research and consultancy in engineering, photovoltaics, nanotechnology. - Renewable energy applications - Development of solar water desalination systems
Entity core technical competences	- Development of solar water desalination systems - Atmospheric water harvesting - Renewable energy applications (solar panels)
Key R&D programs and activities	
Examples of accomplishments	- More than 20 projects in title of solar water desalinations - More than 50 research pares in solar

	water desalinations - Publications in atmospheric water harvesting
Company strategic orientation	- Expand international collaborations in the field of solar water desalinations

SECTION 2: Spanish Company Profile *(Please provide a brief summary of the prospective partner company or organization. This summary may address some or all of the points below)*	
Profile of ideal technology partner	Industrial partner with R & D in solar water desalination. Application of nanotechnology in soar water desalination. Solar systems applications
Core technological competencies and expertise	Water technologies: - Desalination - Water harvesting - Solar water desalination
Other essential qualifications (e.g.: ownership, track records etc.)	
If you have a list of companies with whom you are in contact or interested in contacting, please provide contact details	
If you are interested in collaboration: please specify details and other important information you want to share with a potential company	Solar water desalination Solar systems Nanomaterials applications Atmospheric water harvesting
Interested areas of collaboration	Solar water technologies
Specific R&D contribution you are seeking/offering	

We are interested in solar water desalination technologies, nanotechnology and its applications especially in desalination, thermal solar systems, PV systems and its applications related to water technology, atmospheric water harvesting (AWE) with solar

Our proposal seeks to develop an efficient, low-cost solar water desalination system designed to meet decentralized water production needs. We aim to utilize a parabolic trough (PT) with a solar tracking system to heat a thermal heat storage tank, which is nanotechnology-augmented heat storage material for improved thermal performance. The storage heat will be utilized to operate various solar still configurations, including tubular, pyramids, and spherical.

Additionally, the project incorporates atmospheric water harvesting (AWH), leveraging optimal results from a hybrid PT, photovoltage (PV), and solar still technologies. A comparative study will evaluate different AWH methods focused on temperature reduction techniques and/or

humidity absorption materials. All experiments will be conducted outdoors under the climatic conditions of Suez, Egypt, enabling freshwater production regardless of the presence of saline water source.

Walaa Omar

Signature

Name: Walaa Omar

Date: 30-09-2025

PI. Prof. Mohamed Elashmawy