

## R&D COLLABORATIVE PROPOSAL / COMPANY PARTNER SEARCH

The information you are about to provide in this form will be distributed among Spanish companies matching your company profile and that might be interested in the proposal of collaborative R&D project that you will be describing in this form. (Please use English language for filling in the document)

In the case that your company will establish a R&D project in collaboration with a Spanish company, you could present a Joint Project Proposal to the CHINEKA Program.

### YOUR ENTITY PROFILE

**Name:** Research Center for Eco-Environmental Sciences, Chinese Academy of Sciences(RCEES)

**Number of employees:** 473

**Annual turnover:** 110,000,000 Euros

**Balance Total:** 45,000,000 Euros

**Year of latest financial report:** 2020

**Address:** 18 Shuangqing Road, Haidian District

**City:** Beijing

**Province:** Beijing

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**Additional Contact:**

**Position:**

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**Email:**

## COLLABORATIVE R&D PROJECT PROPOSAL

(Describe as precisely as possible the technology cooperation proposal. Describe what you have to offer and what you expect from your potential partner) Include: Sector Group; Abstract of Project; Innovations Offered; and Current State of Development

<b>Title</b>	(Do not exceed 120 characters) Organic Chemical Polluted Soil Remediation Techniques		
<b>Duration (YM- YM)</b>	2022.01-2025.01		
<b>Budget(1,000 Euro)</b>	SPAIN	CHINA	TOTAL
	400,000 Euros	400,000 Euros	800,000 Euros
<b>Technology Field</b> (Click a box)	<input type="checkbox"/> Smart Cities <input type="checkbox"/> Production Technologies, <input type="checkbox"/> Biomedicine and Technologies for Health, <input checked="" type="checkbox"/> Environment technologies <input checked="" type="checkbox"/> Clean Technologies <input type="checkbox"/> Modern Agriculture <input type="checkbox"/> Advanced Materials. <input type="checkbox"/> Others		
<b>Summary</b>	<p>Due to the more and more strict requirements in the reuse of polluted field in China, huge amount of polluted fields demand techniques for low cost, eco-friendly soil remediation. As one the earliest institutes working in this field, RCEES has done plenty of research work aiming for solving the pollution and environmental management problems of industrial fields.</p> <p>Several techniques from these research work were further adopted in field soil remediation projects including: afterglow oil soil remediation techniques, and in/on situ heating desorption techniques (including electric resistance heating and natural gas heating, coupling with bio-remediation or oxidants). These techniques work well in field applications, however, the energy consumption is still relatively high.</p> <p>Based on the solid basis on previous research and development, we are seeking for partners who has the expertise in utilizing the designing parameters, to reduce the energy consumption, and has potential to promote the application of these techniques.</p>		

**SPANISH PARTNERS**

**(When you know a potential Spanish company, write its name and contact details in this section) Please, make a description of the desire type of Spanish Technology Partner.**

We are open to more potential corporators in this area as well!

#### YOUR ENTITY DESCRIPTION

(Entity Website, Research and development guidelines, strategic alliances, competitive position, etc)

Entity Website: <http://english.rcees.cas.cn/>

Research Center for Eco-Environmental Sciences(RCEES), Chinese Academy of Sciences was in 1975, as the first research institution for eco-environmental science and technology research in China. Currently there are 473 staff in RCEES, including 5 academicians, 105 research professors, 106 associate professors, 179 assistant professors and 28 junior researchers or administrators working in various areas.

RCEES has successively carried out the frontier researches on environmental chemistry, environmental science, and systems ecology, and creative work on the environmental background survey, acid rain investigation, environment safety assessment and many other environmental issues in China. After being a part of the Pilot Project of Knowledge Innovation Program of CAS, RCEES conducts larger research projects. The national and international cooperation becomes much wider and more active. The education capacity for graduate students is also developed, and the competitive capacity is enhanced significantly.

The main purposes of RCEES are to carry out national and international research projects in environmental sciences, environmental engineering, systems ecology and environmental biotechnology, to advance the science and technology nationally and world widely, to provide fundamental data in ecological and environmental sciences for governments and to offer some applied high technology to enterprises. RCEES has set up a number of academic relationships and links with some well known institutes or academies in many countries. Several important international conferences or symposia on eco-environmental sciences have been held here and many visiting scientists, scholars or students are bilaterally exchanged every year.

(The minimum information to show the potential of your company)

**YOUR ENTITY PRODUCTS**  
**(Technologies, applications, services, etc)**

The techniques for soil remediation include:

(1) In-situ Heating Desorption technique

This process is conducted by inserting gas or electric heating rods into organic contaminated soil. Heating the soil causes the organic contaminants to volatilize from the soil and be collected in the reactors on the ground.

(2) In-situ Resistance Heating and Coupling Technique

This process applies three-phase electrodes in the contaminated soil to produce heat through the resistive effect of the soil. The organic pollutants are volatilized from the soil and collected to the ground for treatment, coupling with chemical oxidation and microbial processes can shorten the remediation cycle and reduce remediation costs.

(3) Ectopic Gas Stack Heating Technique

This technique excavates and builds a pile of contaminated soil on the ground and sets up gas heating rods in the pile with a utilized pattern. Gas heating rods to heat the soil, the organic pollutants are collected and disposed.

(4) Smouldering Treatment of Oil Sludge

The smouldering equipments were developed with automatic controlling, monitoring and protecting system to realize the efficient and stable operation of oil sludge smouldering.

These techniques have accomplished field remediation on 32 sites, and were well recognized by the land users. With these projects as demonstrations, more and more projects are on the way.

(The minimum information to show the potential of your company)