
	IDEX 2019 -Call for Post-doc	
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JOB DESCRIPTION

<p>Job Title : Open Post Doc Position in Surface Chemistry and Heterogeneous Catalysis / University of Strasbourg (France)</p>
<p>Job Summary : (English, max 1000 characters) Atomic level understanding of nanomaterial's functionality by means of advanced operando studies: towards more efficient CO₂ hydrogenation catalysts</p>
<p>Job Description : (English, detailed information – max 3000 characters) WARNING: Please indicate the name of the research lab, group leader and supervisor.</p> <p>The utilization of CO₂ as a feedstock to produce fuels contributes to the reduction of carbon emissions and helps to decrease our dependence on fossil fuels. The methanation CO₂ (Sabatier reaction) combines chemical storage of renewable energy, together with greenhouse gas reutilization offering a high energy density product (CH₄). Ni, Co and Ru supported on oxides appear as promising catalysts for this reaction but suffer from fast deactivation due to sintering and carbon deposition. Here we propose the development of an efficient catalyst by introducing a new concept of using metal-doped ceria nanoparticles. After undergone an exsolution treatment these materials combine both high dispersion of the active metal and its close proximity with the ceria support, which are key characteristics of efficient catalysts. The Post-doctoral will use a newly developed method to synthesize the nanoparticles and will optimize the pretreatment to obtain the highest catalytic performance. This effort requires deeper insights into the electronic and geometric structure of the active catalytic states and therefore the project takes advantage of the sophisticated experimental tools for operando characterization which are in disposal in ICPEES but also in the collaborating German Institute (Berlin). The aim is to provide an atomic-level understanding of aspects related to the surface chemistry of functional catalysts and accordingly tune their properties by appropriate modification routes. <i>The Post Doc will join the research group Nanomaterials, Catalysis and Interfaces of ICPEES-UMR 7515 du CNRS and Uds-ECPM under the supervision of Dr. S. Zafeiratos</i></p>
<p>Main research field : WARNING: Please select, trying to be specific, using 'Other' or 'All' will decrease your Job Vacancy visibility</p> <p>Chemistry</p>
<p>Offer Requirements : Applicants should have a strong background in physical chemistry and particularly in surface chemistry. Previous experience in chemical synthesis methods, surface analysis techniques (XPS, AFM etc.) and evaluation of catalytic performances is required. The capabilities to work independently and in a research team will be appreciated. Good level in English, both written and spoken is essential.</p>
<p>Eligibility criteria : The candidate should be a recent PhD graduate (not before 01/01/2015). Candidates that have awarded their PhD title from the University of Strasbourg or the University of Haute-Alsace should have accomplish an international postdoctoral experience of at least two years.</p>

JOB DETAIL

Type of contract : CDD

Status : full time

Company / Institute : <i>ICPEES-UMR 7515 du CNRS and Uds-ECPM</i>

Country : France

City : Strasbourg

Postal Code : 67087

Street : 25 rue Becquerel

APPLICATION DETAILS (mandatory)

Provisional start date : 15/09/19

Application e-mail : spirosz1971@hotmail.com

WARNING: This is the contact e-mail for applicants
