

**Position:** Doctorate (PhD)

**Period:** Fixed, 48 months.

**Research Program:** Methane to Products (M2P)

**Project title:** Project 12 - Exploring methane conversion at high temperatures by solar driven electrochemical reactions

**Research theme area:** High temperature thermochemical conversion of methane, advanced ceramics, heterogeneous catalysis, chromatography and mass spectrometry, thin films.

**Deadline:** July 05, 2019

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**Lead institution:** Universidade Federal do ABC

**Work Address of the position:** Av. dos Estados, 5001, Bangu, Santo André – SP

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**Supervisor:** Daniel Z. de Florio - [dzflorio@usp.br](mailto:dzflorio@usp.br)

**Department:** CECS (UFABC)

**Phone:** (11) 3356-7499

**Co-supervisor:** André S. Ferlauto - [andre.ferlauto@ufabc.edu.br](mailto:andre.ferlauto@ufabc.edu.br)

**Department:** CECS (UFABC)

**Phone:** (11) 4996-8211

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**Submission & documents:**

Candidates should send the requested documentation to the e-mail [opportunities.m2pcine@gmail.com](mailto:opportunities.m2pcine@gmail.com) until July 5, 2019, containing the following attachments:

- Updated CV (with a link to the Lattes Curriculum, if applicable);
  - Number of years since the undergraduate course was concluded;
  - A copy of the academic record/academic transcript of both graduate and undergraduate courses (as applicable).
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**Summary:**

Develop new ceria-based composites for efficient thermochemical methane conversion by solar-driven concentrator at high temperature (~1500 °C). The main issue is to control chemically stable and permanently porous materials that can stand the harsh operative conditions of thermochemical redox cycling.”

**IMPORTANT: THE CANDIDATE MUST BE REGISTERED (SUBSCRIBE) IN THE SELECTIVE PROCESS (CALL) FOR PhD IN NANOSCIENCE AND ADVANCED MATERIALS GRADUATE PROGRAM AT UFABC. MORE INFORMATION ON: <http://nano.ufabc.edu.br/2016/09/23/processo-seletivo/>**

The present PhD position is suited for a highly skilled individual willing to develop research and innovation in the area of energy. Specifically, the workplan of the present position is devoted to advancing electrochemical systems for methane conversion by an emerging cutting-edge field in catalysis, based or supported on ceramic materials.

It also aims to create the conditions for the selected candidate to obtain a high-level master dissertation, and to lead the individual to be highly skilled in research and scientific writing. Being successful, these outcomes would lead the student to suitably reach the next step in the professional career, independently if in industry or academia.

**Requirements to fill the position:**

Motivated prospective candidates with a Master's degree or First degree or (equivalent) with a First Class or Upper Second in Physics, Chemistry, Materials Science, Chemical Engineering or in related disciplines are invited to apply. Prior experience in the synthesis and characterization of ceramic materials and in electrochemistry are highly valued, albeit not required. Applicants should also be able to demonstrate excellent written and oral communication skills, which will be essential for collaborations within CINE, disseminating the results via journal publications and attendance at international conferences. Candidates completing undergrad studies by July/2019 are also highly welcome to apply for this position.

**Funding Notes:**

This PhD studentship is funded by Shell, through the foundation FUNDEP. The studentship will cover a standard maintenance stipend of R\$41,717.52 per annum (R\$3,476.46 per month).