Technical University of Denmark



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Postdoc position in Experiments and Modeling of High Pressure and High Temperature Reservoir Fluids (CERE)

APPLY ONLINE

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One 3-year Postdoc position is available at Center for Energy Resources Engineering, Department of Chemistry, the Technical University of Denmark (CERE DTU).

The position is funded by the Danish National Advanced Technology Foundation under the project "New Extreme Oil and Gas in the Danish North Sea / NextOil". In this project, CERE DTU will collaborate closely with the Danish Geotechnical Institute (GEO), Maersk Oil and Gas, and DONG Energy. The project focuses on issues related to high



pressure and high temperature (HP/HT) petroleum reservoirs that are an important but very challenging hydrocarbon resource.

The vision of NextOil is to add crucial knowledge to three aspects—rock mechanics, hydrocarbon reservoir fluids, and scaling—in the development of HP/HT petroleum reservoirs so as to reduce the related technical and economic risks and to convert the Danish HP/HT hydrocarbon resources into attractive commercial reserves. NextOil consists of three work packages (WPs) and the advertised Postdoc position is within WP2 on hydrocarbon reservoir fluids. WP2 will generate a more accurate description of the physical properties and phase equilibrium for HP/HT reservoir fluids through a combined effort of experimental studies and modeling work.

Responsibilities and tasks

The postdoc is expected to take a major responsibility of the experimental study in WP2, and also to do some related modeling work. The involved tasks include:

- Start up a HP/HT apparatus for HP/HT PVT and phase equilibrium study. Part of the apparatus will be self-
- Measurement of HP/HT fluid properties and phase equilibrium data for developing relevant thermodynamic models.
- Experimental characterization of reservoir fluids.
- Development of a workflow for the determination of the Joule-Thomson effect at HP/HT conditions.
- Experimental investigation of organic <u>deposit</u> at production conditions.
- Coordination with other participants in the project for model development.

Qualifications

We are looking for an experimentally oriented scientist holding a PhD degree or equivalent. The candidate should have a good knowledge of applied thermodynamics, hands-on experience in high pressure PVT study, preferentially experience with experimental design. Competencies in thermodynamic modeling will be an additional advantage although the position is mainly experimental. The candidate also assumes some coordination responsibility in WP2 and should have good communication skills in English and be able to work independently.

Salary and terms of employment

The <u>appointment</u> will be based on the collective agreement with the Confederation of Professional Associations. The allowance will be agreed with the relevant union.

The position is available for a period of three years, starting from August 1st, 2013.

Further information

For further information, please contact Senior Scientist Wei Yan (weya@kemi.dtu.dk) and Professor Erling H. Stenby (ehst@kemi.dtu.dk).

Application procedure

We must have your online application by 1 April 2013.

Applications must be submitted as **one PDF file** containing all materials to be given consideration. To apply, please open the link "Apply online," fill in the online application form, and attach **all your materials in English in one PDF file**. The file must include:

- Application (cover letter)
- CV

- Diploma (MSc/PhD)
- Names of references
- List of publications indicating scientific highlights

Applications and enclosures received after the deadline will not be considered.

All interested candidates irrespective of age, gender, race, disability, religion or ethnic background are encouraged to apply.

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