

Post doc position - In situ measurements of dynamic effects in heterogeneous catalysts

Catalysis for Sustainable Energy (CASE) is a new initiative at The Technical University of Denmark (DTU). The aim is to discover novel methods for converting sustainable energy for example from the sun and the wind into fuels by developing a science-based rational design strategy for new catalysts. CASE comprises both experimental and theoretical approaches. We specifically focus on heterogeneous catalysis, electrocatalysis, and photocatalysis. More information can be found on the webpage www.case.dtu.dk.

For a two year post doc position we are looking for a highly qualified candidate with hands-on experience within at least one of the areas: catalytic materials, ultra-high vacuum measurements, transmission electron microscopy, or X-ray diffraction. This person will have two primary tasks:

1) To integrate E-TEM equipment at DTU CEN (Center for Electronnanoscopy) with *in situ* XRD and activity measurements. The major equipment parts are already available but intelligent and creative solutions are needed to ensure an unchanged catalyst material by the transfer between analysis methods.

2) To conduct *in situ* measurements (E-TEM, XRD, and activity measurements) to identify and explain dynamic effects of the nanoparticle morphology in the catalyst material. These may be caused by temperature and/or the gas environment. Catalysts under investigation could for example be for the conversion of synthesis gas to fuels. These measurements will be closely connected to research activities in DTU CEN (www.cen.dtu.dk) and in CINF (Center for Individual Nanoparticle Functionality) at DTU Physics (www.cinf.dtu.dk).

Qualifications

The successful candidate must have a PhD in the area of experimental investigations of nanomaterials.

Salary and terms of employment

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

Further information

If you have questions please contact Senior Scientist Jakob Wagner at CEN (jakob.wagner@cen.dtu.dk) or Associate Professor Jane H. Nielsen at CINF (jane@fysik.dtu.dk).

Application procedure

Applications are accepted until January 10, 2010.

Interested applicants should apply online at www.dtu.dk/vacancy. Please open the link "apply for this job online" and fill in the application form and attach your application. Please include CV and documentation for education, jobs, and publications.

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