

Postdoc position in Heterogeneous Catalysis at the Interdisciplinary Nanoscience Center (iNANO), University of Aarhus, Denmark

We have a *one-year postdoc opening with the possibility of extension for a further year* in heterogeneous catalysis at the Interdisciplinary Nanoscience Center, University of Aarhus. The project is part of a large research program at the iNANO Center aimed at providing fundamental insight into processes relevant to heterogeneous catalysis using Scanned Probe Microscopies (SPMs). The position is available immediately.

The project involve synthesis of realistic catalyst model systems, i.e. supported catalytically active metallic, metal-sulfide or metal-oxide nanoclusters and subsequent characterization with Scanning Tunneling Microscopy (STM) (1), Scanning Force Microscopy (SFM) (2), X-ray Photoelectron Spectroscopy and other surface science techniques. Our research facilities furthermore include unique instrumentation for high-pressure STM for studies of catalysts in the working state (3, 4) and fast-scanning (video-rate) STMs which can provide movies of surface reaction dynamics with high temporal and atomic-scale spatial resolution (6-8). Furthermore, the project has a close industrial link, since the research is conducted in close collaboration with Haldor Topsøe A/S, a Denmark-based world-leading catalyst company. This fruitful interplay between fundamental research and industry has already led to the manufacturing of new and better catalysts developed on the basis of fundamental research, and with this opening we want to further expand these activities.

The ideal candidate for the post doc position has a **PhD in physical chemistry, physics or materials science** or related disciplines, and a keen interest in doing high-profile research. Applicants with experience with SPM or surface science will be preferred. The Interdisciplinary Nanoscience Center (iNANO) (www.inano.dk) is a major research and education center based at the University of Aarhus, Denmark. iNANO offers a dynamic, interdisciplinary research environment with many industrial, national and international collaborators.

For further information, please contact the iNANO Director, Prof., D.Sc. Flemming Besenbacher (fbe@inano.dk). Potential candidates must send their CV, full publication list, and a short description of qualifications, research plan, and research network to fbe@inano.dk.

1. F. Besenbacher *et al.*, *Science* **279**, 1913 (1998).
2. J. V. Lauritsen *et al.*, *Nanotechnology*. **17**, 3436 (2006).
3. R. T. Vang *et al.*, *Nature Materials* **4**, 160 (2005).
4. J.V. Lauritsen *et al.*, *Nature Nanotechnology* **1**, 53 (2007)
5. R. T. Vang *et al.*, *Phys. Chem. Chem. Phys.* **9**, 3460 (2007)
5. S. Horch *et al.*, *Nature* **398**, 134 (1999).
- 6 J.V. Lauritsen *et al.*, *Catalysis Today* **111** 34 (2006)
6. D. Matthey *et al.*, *Science* **315**, 1692 (2007)
8. S. Wendt *et al.*, *Phys. Rev. Lett.* **96**, 066107 (Feb, 2006).
6. S.Wendt *et al.*, *Science* **320** (2008) 1755,