



UNIVERSITETET I BERGEN

**University of
Bergen**
Department of
Chemistry

Jobbnorge-ID: 151674

Søknadsfrist: Closed

Nettside:

Omfang:

Varighet:

PhD position in computational catalysis and molecular design

The [Department of Chemistry](#), University of Bergen, has 2 vacancies for research fellows (PhD candidates) in computational catalysis and molecular design for at least 3 and up to 4 years. The positions are linked to projects on chemical conversion and valorization of renewable resources, funded by the Research Council of Norway.

About the project/work tasks

In one project, we will develop recyclable catalysts for environmentally friendly and economically viable removal of the remaining oxygen functionalities of lignin-derived bio-oil to give biofuel. The catalysts will be developed with the help of mechanistic insight and predictions from quantum chemical calculations, and these calculations will be the focus of the PhD student. Other project co-workers will synthesize and test the most promising predicted catalysts, and the project will involve close collaboration between the computational and experimental chemists. A more [detailed description](#) of the position is available.

In a second project, we will model, using quantum chemical calculations, electrocatalytic reduction of CO₂ over nanostructured catalysts based on metal/metal oxide. Energy profiles of the individual reaction steps of the reduction will be calculated using both slab and cluster models of various crystallographic planes and defect sites, thus providing detailed insight into the mechanism of the reduction. The project and the PhD student will benefit from taking part in a network ([NordCO₂](#)) of researchers working on CO₂ conversion in the Nordic countries. A more [detailed description](#) is available.

Qualifications and personal qualities

- The applicants must hold a master's degree or equivalent in chemistry, physics or bordering fields. Master students can apply provided they complete their final master's exam before 29.06.2018. It is a condition of employment that the master's degree has been awarded.
- Candidates should have a strong background in quantum chemistry and applied quantum chemistry. Background from other branches of computational chemistry, such as molecular mechanics and dynamics, is also relevant.
- Knowledge of inorganic/organometallic chemistry is an advantage.
- Knowledge of methods of chemometrics and cheminformatics is an advantage.
- Experience in programming is an advantage.
- The successful candidate must have
 - Well-developed critical thinking and writing skills.
 - The ability to work independently, in a structured manner, and also be able to cooperate with others.
 - Proficiency in both written and oral English.

Personal qualities and social skills, including the ability to work independently, structured and with good, collaborative relations, will count in the assessment of the applicants. *Ambitions and potential for scientific career will also be considered and given substantial weight.* The top-ranked candidate will have the opportunity to choose between the two projects.

About the PhD position

The duration of the PhD position is up to 4 years, of which 25 per cent of the time each year comprises required duties associated with research, teaching and dissemination of results. Candidates who master one of the Scandinavian languages may be employed for 4 years, with 25 per cent of the total time comprising obligatory duties associated with teaching at the department. Candidates who are not sufficiently proficient in Norwegian, Swedish or Danish will normally be hired for 3 years.

The employment period may be reduced if you have previously been employed in a recruitment position.

About the research training

As a PhD Candidate, you must participate in an approved educational programme for a PhD degree over a period of 3 years. A final plan for the implementation of the research training must be approved by the faculty within three months after you have commenced the position. It is a condition for employment that you [satisfy the enrolment requirements for the PhD programme](#) at the University of Bergen.

We can offer

- a good, professionally challenging and international working environment
- well-equipped and modern laboratories, including state-of-the-art hardware and software for computational chemistry research
- membership in a well-funded and interdisciplinary research project
- salary at pay grade 50 (code 1017/pay framework 20, alternative 8) in the state salary scale. This constitutes a gross annual salary of NOK 436 500. Further promotions are made according to length of service in the position.
- enrolment in the Norwegian Public Service Pension Fund
- a position in an inclusive workplace (IA enterprise)

- good welfare benefits

Your application must include

- a brief account of the applicant's research interests and motivation for applying for the position
- the names and contact information for two referees. One of these should be the main advisor for the master's thesis or equivalent thesis
- CV
- transcripts and diplomas showing completion of the bachelor's and master's degrees, or official confirmation that the master's thesis has been submitted
- relevant certificates/references
- a list of any works of a scientific nature (publication list)
- any publications in your name

The application and appendices with certified translations into English or a Scandinavian language must be uploaded at Jobbnorge.

General information

For further details about the position, please contact:

Professor [Vidar R Jensen](#), phone +4755583489 / e-mail: Vidar.Jensen@kj.uib.no.

Professor [Knut J. Børve](#), phone +4755583365 / e-mail: Knut.Borve@uib.no)

The state labour force shall reflect the diversity of Norwegian society to the greatest extent possible. Age and gender balance among employees is therefore a goal. It is also a goal to recruit people with immigrant backgrounds. People with immigrant backgrounds and people with disabilities are encouraged to apply for the position.

The University of Bergen applies the principle of public access to information when recruiting staff for academic positions.

Information about applicants may be made public even if the applicant has asked not to be named on the list of persons who have applied. The applicant must be notified if the request to be omitted is not met.

Further information about the employment process can be found [here](#).

Tilleggsinformasjon

Arbeidssted: