PhD fellowship in ReUseWaste: Development of membrane technology for production of concentrated fertiliser and clean water

A position as a PhD Research Fellow in Institute of Chemical Engineering, Biotechnology and Environmental Engineering, University of Southern Denmark in Odense is available as of June 1st or as soon as possible hereafter for a three-year period. The application deadline is April 16th 2012.


Project description
This PhD study involves investigation of membrane technologies for production of concentrated bio-fertilizers and clean water from pretreated slurry and other organic wastes. Combinations of several membrane technologies must be carried out to produce clean water and extract fractions containing ammonia, potassium and phosphorus. Experiments will be with pilot- or full scale equipment with the objectives of:

1. Identify and investigate potential membrane technologies for fertilizer production
2. Document results of separation efficiencies and stream characteristics with appropriate analytical techniques.
3. Pilot- and full scale testing of combined methods
4. Documentation of fertilizer products’ composition

The PhD student must collaborate with other PhD students and postdocs working in the ReUseWaste project in both Danish and international universities and companies. More specifically, the research is a part of the work package of technology for treatment and management. The study will be carried out at University of Southern Denmark (SDU), Odense, but in close collaboration with additional partners. There will be opportunities for the student to carry out part of the research at Alfa Laval, Nakskov, Denmark or Wageningen University, The Netherlands. Results from these stays will be presented as peer-reviewed article(-s).

We are seeking a candidate preferably with a master degree in environmental, agricultural or chemical related engineering or science or a related field. The candidate should have a strong interest in membrane technology and separation of organic fractions from various origin. Experience with any of these aspects will be an advantage.

Key criteria for the assessment of candidates (documentation must be provided in application):

- A master degree related to the subject area as described above
- The grade point average achieved
- Professional qualifications relevant to the PhD programme
- Previous publications
- Relevant work experience
- Other professional activities
- Fluency in English
- Interpersonal skills
- Proposal for research activities
Formal requirements and eligibility
The successful applicant will be enrolled as a PhD student at the PhD School at the Faculty of Engineering within the Research Training Programme of Energy and Environmentally Efficient Technologies.

The successful candidate will participate in a Marie Curie international training network and will work in a highly interactive international environment with other Marie-Curie PhD students, researchers and Industry. Furthermore, the PhD student will execute a part of the work during extended visits at the partner institutions outside of Denmark.

At the time of recruitment, it is a requirement that PhD candidates have not been awarded a doctorate degree and are in the first 4 years (full-time equivalent) of their research careers. Furthermore, at the time of selection by SDU, researchers must not have resided or carried out their main activity (work, studies, etc.) in Denmark for more than 12 months in the 3 years immediately prior to their recruitment. Short stays, such as holidays, are not taken into account.

Recruitment is done in accordance with the rules set out by the FP7 Marie Curie Initial Training Networks (FP7-PEOPLE-2011-ITN). The selection procedure conforms to the European Charter for Researchers and the Code of Conduct for the Recruitment of Researchers.

An assessment committee will be appointed to evaluate the applications. The ReUseWaste Steering Committee will promote three candidates chosen from the qualified applicants. The final selection of a successful candidate will be made by the principal supervisor following interviews. By the end of May 2012, all applicants will have received information regarding the evaluation of their application. Receipt of the application will not be acknowledged.

For further information please contact Assoc. Prof. Knud V. Christensen, tel.: +45 6550 7478, e-mail: kvc@kbm.sdu.dk, as well as the university’s homepage:

Terms of employment
The successful applicant will be employed in accordance with the agreement between the Ministry of Finance and AC (the Danish Confederation of Professional Associations) and in accordance with the rules and regulations laid down in the Marie Curie Grant Agreement.

The successful candidate will be enrolled at this university in accordance with faculty regulations and the Danish Ministerial Order on the PhD Program at the Universities (PhD executive order).

Appointment as a PhD Research Fellow is for three years (5+3 program). Employment stops automatically at the end of the period. The holder of the Fellowship is not allowed to have other paid employment during the period.

Further information about the PhD-study can be found at the
http://www.sdu.dk/Om_SDU/Fakulteterne/Teknik/Forskning/Phd_TEK/Optagelse?sc_lang=en
Application procedures
The university encourages all persons interested in the position to apply, regardless of their age, gender, religious affiliation or ethnic background.

Please send your application and enclosures, marked “Position No. 124006” to University of Southern Denmark, Faculty of Engineering, Niels Bohrs Alle 1, DK-5230 Odense M, Denmark or by email to Sanne Lefevre, sle@tek.sdu.dk.

Deadline for application is April 16th 2012. Incomplete applications and applications received after the deadline will neither be considered nor evaluated.

Applications – in English – must include:
- Cover Letter, stating which PhD project you are applying for and detailing your motivation and background for applying for the specific PhD project,
- Max 1-page proposal for research activities to pursue in the PhD study program
- CV
- Diploma and transcripts of records
- Other information for consideration, e.g. list of publications (if any), peer reviewed and other
- Personal Recommendations
- A maximum of 3 relevant scientific works which the applicant wishes to be included in the assessment.

Only applications with a letter of motivation for the specific position, incl. a max 1-page proposal for research activities, will be accepted

The applicant will be assessed according to the Ministry of Science Technology and Innovation Executive Order no 284 of 25 April 2008 and according to the criteria stipulated for recruitment in FP7-PEOPLE-2011-ITN. The selection procedure conforms to the European Charter for Researchers and the Code of Conduct for the Recruitment of Researchers.

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SEVENTH FRAMEWORK PROGRAMME OF THE EUROPEAN UNION