Norwegian University of Life Sciences

Jobbnorge ID: 208555
Deadline: 8/15/2021
Website: http://www.nmbu.no
Scope: Fulltime
Duration: Fixed Term

Do you want work in an exciting industrial research project with BASF - the world's largest chemical company?

PhD position within material science

About the position

The Department of Mechanical Engineering and Technology Management, Faculty of Science and Technology at the Norwegian University of Life Sciences (NMBU) has a vacant PhD-position in material engineering. The PhD position is for a period of 3 years, or up to 4 years if teaching and other work duties are agreed.

Additives play a crucial role in the production, recycling, and durability of plastics. BASF has in recent decades facilitated the transition from the usage of powder additives - which comes with a number of practical and health-related issues, to the usage of granulate additives which are easier to handle and more resource efficient. In this context, the structural integrity of the granulates is crucial. BASF therefore seek to gain knowledge on how the mixtures of additives in the granulates influence their integrity and mechanical and physical properties.

At NMBU proto-studies on such granulates will be performed based on local competence. The project also provides a unique opportunity to take in part in up-scaling promising granulates to industrial plants worldwide. In addition, the student will perform correlation analysis between mixture composition and physio-mechanical properties, with support from researchers at BASF and the Materials Theory and Informatics group at NMBU. The student will also conduct regular visits to the BASF facility in Switzerland and work closely with technicians and researchers at NMBU.

The slogan of BASF "BASF: We create chemistry for a sustainable future" is reflected in multiple initiatives to reduce the impact of the materials. BASF also has a net zero-emission goal by 2050.

Main tasks

Research tasks can include:

- Investigate production parameters for the fabrication of granulates
- Perform mechanical and physical characterization of granulates.
- Analyze correlations of material properties.

The successful candidate is expected to enter a plan for the progress of the work towards a PhD degree during the first months of the appointment, with a view to completing a doctorate within the PhD scholarship period.

Competence

In order to be appointed, the candidate must meet the requirements for admission to one of the PhD programs at NMBU. A master's degree of at least 120 credits (ECTS) is required, which is based on a bachelor's degree of at least 180 credits (ECTS), or cand.med.vet. degree, or integrated master's degree of at least 300 credits (ECTS). MSs thesis by 30. June 2021 may be considered. The applicant must have a documented strong academic background from previous studies, and be able to document good English skills, both written and oral. For more detailed information on admission criteria, see the PhD Regulations and the "supplementary provisions for the PhD programmes".

The applicant must document expertise and interest in the research subject.

Required Academic qualifications

- Master's degree in Mechanical, Material, or Chemical Engineering or related engineering disciplines. Applied physics and Materials science or similar backgrounds can also eligible
- Excellent grade record
- Strong written and oral communication skills in English

The following experiences and skills will be emphasized:

- Experience with experimental measurement techniques
- Familiarity with Python/Matlab or related scripting languages
- Experience with fabrication of testing of granulates, plastics, or similar products is an advantage, but this is not required

You need to:

- Be dedicated, hard-working, and quality-oriented
- Have the ability to work independently and in a systematic fashion
- Have good collaboration skills

Remuneration and further information

The position is placed in government pay scale position code 1017 PhD. Fellow. PhD. Fellows are normally placed in pay grade 54 (NOK 491.200) on the Norwegian Government salary scale upon employment and follow ordinary meriting regulations.

Employment is conducted according to national guidelines for University and Technical College PhD scholars.

For further information, please contact Assoc. Prof. Odd Ivar Lekang, E-mail: odd.lekang@nmbu.no; phone +47 67231606 or

Assoc. Prof. Kristian Berland, E-mail: kristian.berland@nmbu.no; phone +47 67231536

Information for PhD applicants and general Information to applicants

Application

To apply online for this vacancy, please click on the 'Apply for this job' button above. This will route you to the University's Web Recruitment System, where you will need to register an account (if you have not already) and log in before completing the online application form.

Application deadline: 15.08.2021

Publications should be included electronically within the application deadline. Printed material which cannot be sent electronically should be sent by surface mail to the Norwegian University of Life Sciences, Faculty of Science and Technology, P.O. Box 5003, NO-1432 Ås, within (15.08.2021). Please quote reference number 21/03125.

If it is difficult to judge the applicant’s contribution for publications with multiple authors, a short description of the applicant’s contribution must be included.

Applications should include (electronically):

- A letter of intent
- Curriculum vitae
- Full publication list
- Copies of degree certificates and transcripts of academic records (all certified)
- A list of two persons who may act as references (with phone numbers and e-mail addresses)
- Proof of English proficiency must be attached in accordance with NMBU PhD regulation section 5-2 (3).

About The Faculty of Science and Technology

The Faculty of Science and Technology (REALTEK) develops research-based knowledge and educates civil engineers and lecturers needed to reach the UN's sustainability goals. We have approximately 150 employees, 70 PhD students and soon 1500 students. The education and research at REALTEK cover a broad spectrum of disciplines.

This includes data science, mechanics and process engineering, robotics, construction and architecture, industrial economics, environmental physics and renewable energy, geomatics, water and environmental engineering, applied mathematics as well as secondary school teacher education in natural sciences and use of natural resources such as in agriculture, forestry and aquaculture. The workplace is in Ås, 30 km from Oslo.

The Norwegian University of Life Sciences (NMBU)

NMBU has a particular responsibility for research and education that secures the basis for the life of future generations. Sustainability is rooted in everything we do and we deliver knowledge for life. NMBU has 1,800 employees of which about 250 phd scholarships and 6,000 students. The university is divided into seven faculties.

NMBU believes that a good working environment is characterised by diversity.

We encourage qualified candidates to apply regardless of gender, functional ability, cultural background or whether you have been outside the labour market for a period. If necessary, workplace adaptations will be made for persons with disabilities. More information about NMBU is available at www.nmbu.no.

Additional information

Place of service:

Universitetstunet 3 1430 Ås (Ås Municipality)