

EN

All jobs

Assistant/Associate Professor in Comprehensive Recycling of Materials

JOB DESCRIPTION

The increased complexity of materials such as coatings, hybrid and composites, as well as sophisticated alloys make the materials recycling very challenging. Materials recyclability is essential for materials sustainability and the promotion of a circular economy. Within the department of Materials Science and Engineering (MSE) we offer a tenure track position for comprehensive recycling and re-use of materials, in order to strengthen our portfolio of materials recyclability and sustainability. Functional recycling, i.e. the recycling of materials for re-use in the same function, is of considerable interest. Integration of comprehensive recycling into the materials design will contribute greatly to the materials sustainability and circular economy.

In this position you will focus on the development of a comprehensive recyclability index for complex materials such as hybrids and composites and the technology for cost-efficient metallurgical recycling of all the valuable elements to their virgin quality without compromising the environment. This will be closely linked to the development of innovative strategies that integrate the recycling notion into material design, production and use in the product. You will complement existing expertise within MSE, and strengthen the departmental portfolio for the whole materials cycle. You will maintain active, strong, and fruitful connections with existing research and teaching in the area of materials recycling and sustainability development. For that reason you will also work closely with other departments (Cognitive Robotics, Maritime & Transport Technology, Biomechanical Engineering, Process & Energy) within the faculty to promote sustainable design of machines and products, as well as processes, with the strategy of “design for recyclability and sustainability”. You work on developing your own research field, leading to playing a leading role within

this field in collaboration with other universities, research institutes, industry and other departments of the 3mE faculty;

Teaching of materials recycling at master level and supervision of bachelors, masters and PhD students are important part of the job. You will be responsible for acquiring research funding in the field of materials recycling from Dutch government and industry as well as at EU level. Furthermore, extensive use of various materials characterization techniques and development of research labs together with the existing scientific staff within MSE will be an integral part of your responsibilities.

Published

yesterday

Deadline

30 Sep

**Specifications**

max. 38 hours per week

€3514—€6738 per month

Delft

[View on Google Maps](#)

Delft University of Technology (TU Delft)

REQUIREMENTS

We are interested in candidates with the following qualifications:

- PhD in Materials Science and Engineering, Applied Physics, Mechanical Engineering or a closely related field; sound knowledge in materials and metals recycling and refining;
- Strong track record in scientific research, as evident from papers in international and peer-reviewed journals;
- Post-doctoral research experience, also outside the Netherlands; industrial experience in metals or materials recycling and knowledge in physical separation technologies will be an advantage;

- Skills in both experimental research and modelling and simulation of metallurgical and recycling processes are important. Practical experience in metallurgical recycling (high temperature processing, hydrometallurgy and electrochemistry) and chemical separation technology as well as skills in materials characterization for metallic and composite materials are essential.
- Potential to take project ownership, including management skills;
- Strong analytical skills and ability/interest to work at the intersection of several research domains;
- Experience and strong commitment to excellence in teaching; experience in the supervision of bachelor and master students and preferably in (co-)supervision of PhD students;
- Good communication skills, teamplayer; an inspiring contribution to students and colleagues within and outside the department.

CONDITIONS OF EMPLOYMENT

At the start of the tenure-track you will be appointed as Assistant Professor for the duration of six years. Group leader, department leaders and you will agree upon expected performance and (soft) skills. You will receive formal feedback on performance and skills during annual assessment meetings and the mid-term evaluation. If the performance and skills are evaluated positively at the end of the tenure track, you will be appointed in a permanent Assistant Professor position. However, depending on the qualifications of the candidate, a level of associate professor can also be offered directly at the beginning of the employment. For more information please visit www.tudelft.nl/tenuretrack.

TU Delft offers a customisable compensation package, a discount for health insurance and sport memberships, and a monthly work costs contribution. Flexible work schedules can be arranged. An International Children's Centre offers childcare and an international primary school. Dual Career Services offers support to accompanying partners. Salary and benefits are in accordance with the Collective Labour Agreement for Dutch Universities.

TU Delft sets specific standards for the English competency of the teaching staff. TU Delft offers training to improve English competency. Inspiring, excellent education is one of our central aims. If you have less than five years of experience and do not yet have your teaching certificate, we allow you up to three years to obtain this.

'TU Delft creates equal opportunities and encourages women to apply'

Fixed-term contract: Tenure

EMPLOYER

Technische Universiteit Delft

Delft University of Technology (TU Delft) is a multifaceted institution offering education and carrying out research in the technical sciences at an internationally recognised level. Education, research and design are strongly oriented towards applicability. TU Delft develops technologies for future generations, focusing on sustainability, safety and economic vitality. At TU Delft you will work in an environment where technical sciences and society converge. TU Delft comprises eight faculties, unique laboratories, research institutes and schools.

DEPARTMENT

Faculty Mechanical, Maritime and Materials Engineering

The **3mE Faculty** trains committed engineering students, PhD candidates and post-doctoral researchers in groundbreaking scientific research in the fields of mechanical, maritime and materials engineering. 3mE is the epitome of a dynamic, innovative faculty, with a European scope that contributes demonstrable economic and social benefits.

The department of Materials Science and Engineering (MSE) aims to provide internationally recognised, high quality materials research of benefit to industry and society, addressing material life cycle, structure, properties and functionality from a physics-based perspective. MSE provides coherent and innovative research dedicated to the sustainable development, characterisation, and understanding of materials that perform better, last longer, enhance function, conserve resources, and have a low environmental footprint. The department operates on a principal investigator model, enabling researchers to maximise both individual and collective potential.

Given the increasing interest and focus on material science and engineering solutions for complex, timely and challenging societal and technological needs, MSE is expanding its scientific staff and research topic portfolio.

ADDITIONAL INFORMATION

For information about this position you can contact Associate Professor Dr. Yongxiang Yang, e-mail y.yang@tudelft.nl.

For information about the selection procedure, please contact Hilma Bleeker, HR advisor, email: h.m.bleeker@tudelft.nl.

To apply, please send:

- a detailed CV;
- motivation letter;

- a research and teaching statement;
- electronic copies of your top three publications;
- contact data of at least three references.

All documents should be combined to a single pdf file. Applications can be submitted by e-mail to application-3mE@tudelft.nl.

|micrositetu

Apply now (76 days remaining)

Specifications

Professors, associate professors, assistant professors and lecturers

Engineering

max. 38 hours per week

€3514—€6738 per month

Doctorate

3mE19-27

Employer



Delft University of Technology (TU Delft)

[Learn more about this employer](#)

Location

Mekelweg 2, 2628 CD, Delft

[View on Google Maps](#)

Jobs

Career advice

Post a job

About AcademicTransfer

Terms and conditions

Contact

Blog