Metal-organic frameworks as a platform for catalytical CO2 sequestration

Summary

Current project deals with CO2 reactions with small organic molecules via CH-activation enabling access to a novel platform for future chemical industry. Thus, metal-organic framework (MOF) based catalysts will be developed for CO2 addition to alkyl groups of various organic compounds leading to novel feedstock materials.

Research field:	Chemical, materials and energy technology
Supervisor:	Prof. Dr. Allan Niidu
Availability:	This position is available.
Offered by:	School of Engineering Virumaa College
Application deadline:	Applications are accepted between June 01, 2022 00:00 and June 30, 2022 23:59 (Europe/Zurich)

Description

Stepping away from fossil fuels will inevitably lead to redefining of chemical industry since new feedstocks are needed to satisfy societies need for relatively cheap and abundant materials. As most of materials are and likely will be based on carbon, a new carbon source is required. To alleviate the problem present, it is proposed to use novel catalytic systems to incorporate CO2 to chemical feedstock materials. PhD candidate will pursue.

The applicants should fulfill the following requirements:

Applicant should have MSc degree in chemistry, chemical engineering, or related field. The MSc degree must be obtained not later than the date of employment in the project. Fluency in English is required as working environment is international. Experience in synthesis and characterization of chemical compounds will also be appreciated. Mid-level knowledge of analytical techniques like GC-MS, NMR, XRD, TGA, FTIR is a must.

To get more information or to apply online, visit https://taltech.glowbase.com/positions/513 or scan the the code on the left with your smartphone.