



BOELO SCHUUR

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Boelo Schuur has studied Chemical Engineering in Groningen and obtained his MSc and PhD degrees under supervision of Erik Heeres. In 2008 he became assistant professor in the group of André de Haan at the TU Eindhoven, and was visiting researcher in the Alan Hatton group at MIT.

Currently he is professor in separation technology in the Sustainable Process Technology group at the University of Twente with a main focus on affinity fluid separations. Among the application areas are biorefineries, e.g. based on microalgae and on lignocellulosic biomass, as well as recovery of valuable molecules from digested wastewater. To gain better insight in intermolecular interactions in affinity separations, molecular modeling in combination with isothermal titration calorimetry are helpful tools. Regeneration of solvents and sorbents is mostly done through changing conditions such as temperature or pressure, but in some cases are also done through the use of stimuli responsive separating agents such as CO₂-switchable solvents.

Boelo has presented invited plenary and keynote lectures at seven international conferences, including the plenary lecture at the International Solvent Extraction Conference, ISEC 2017 in Japan. He published 92 peer reviewed papers. He teaches on Industrial Chemistry and Processes, and Advanced Molecular Separations. Furthermore, he has been board member of the Netherlands Process Technologists NPT from 2012-2018, and currently still serves as NPT-representative at the EFCE, and as secretary of the EFCE Working Party on Fluid Separations.

“Solvent Selection and Design for Bio-Refinery Fluid Separations”

Abstract

Fluid separations are highly important in the chemical industry, they account for approximately 50% of the costs. If the separation efficiencies can be improved, this can also have significant impact on the overall footprint of processes. Using solvent-based separations can potentially save energy, but to select or design the most appropriate solvent is not straight forward. Also for innovative production routes such as bio-refineries and circular economy approaches, solvent-based separations are essential, and selection and design of solvents is highly important. Several studies on bio-refineries will be used to discuss the solvent selection and design approaches that have been studied in my group.

Friday, October 25th

1:00 – 1:50AM | 2420 LEEP2