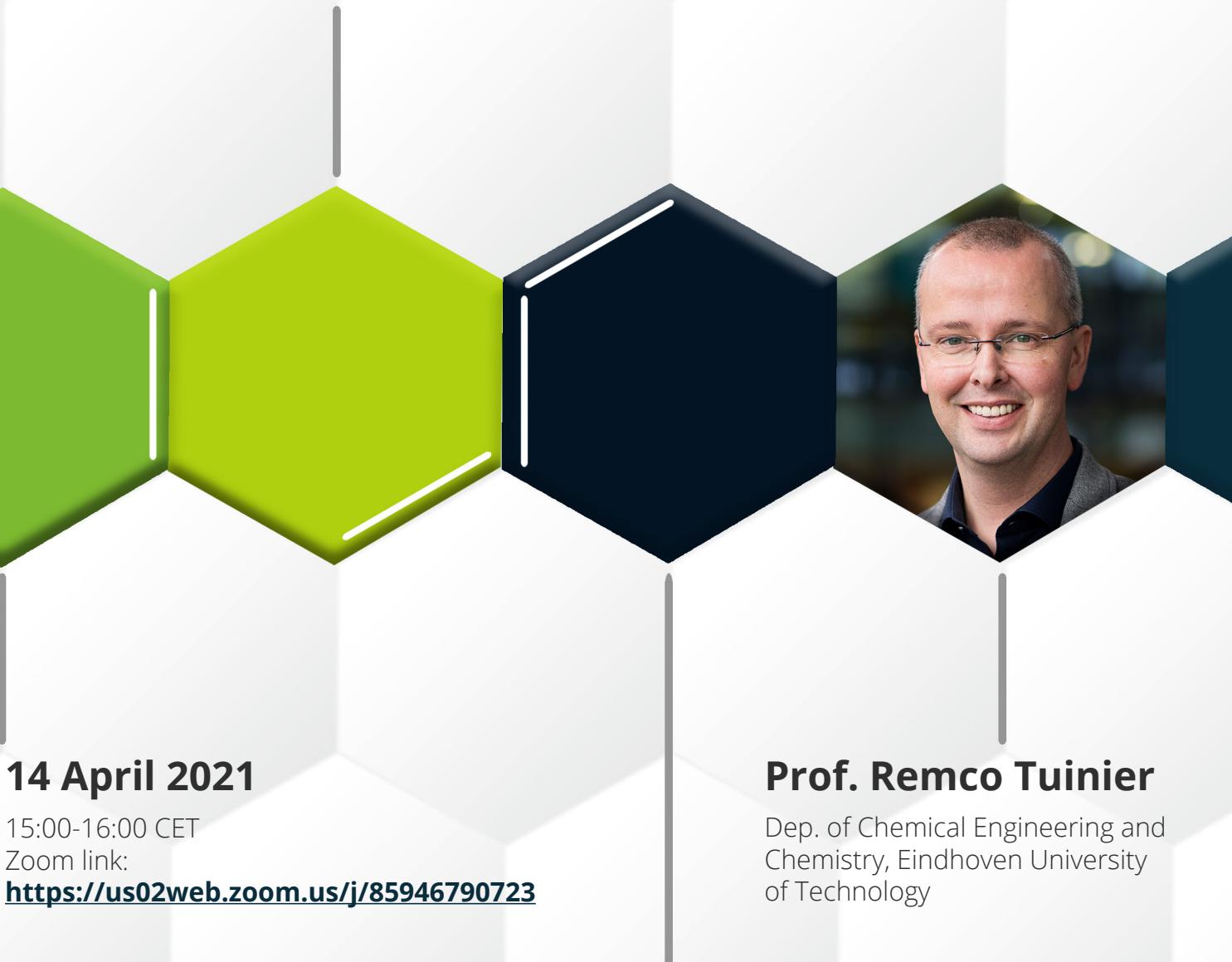


EuroTech Seminar

Does the Gibbs Phase Rule apply to the Phase Behaviour of Colloid-Polymer Mixtures?



14 April 2021
15:00-16:00 CET
Zoom link:
<https://us02web.zoom.us/j/85946790723>

Prof. Remco Tuinier
Dep. of Chemical Engineering and Chemistry, Eindhoven University of Technology

In the last decades it was shown that the stability of colloidal dispersions can be controlled by adding non-adsorbing polymers. Often the depletion-interaction is used as the tool to induce a controlled, tuneable attraction between colloidal particles. In this lecture it is discussed whether a colloid-polymer mixture can be treated as an effective one-component system with controlled attraction and how this description is related to understanding the phase behaviour. In this talk it is demonstrated that mixtures of rod-like colloids plus added depletants exhibit a strikingly rich multi-phase behaviour involving even four- and five-phase equilibria. It is discussed whether the Gibbs phase rule still applies for colloid-polymer mixtures.