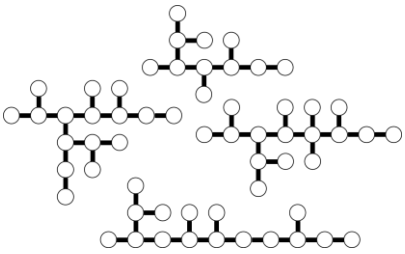
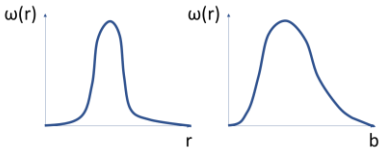
Graz University of Technology
Institute of Chemical Engineering and Environmental Technology

☐ Bachelor Thesis
☒ Master Thesis

☒ theoretical
☐ experimental
☐ constructive

Topic: **Development of a continuous LCT that considers branching**





Mixtures with a large number of isomers are a challenge for conventional thermodynamic models to describe. Considering all contained isomers as single components leads to large computational efforts in the calculation. Furthermore, a large number of parameters are requiered for the individual isomers.

One approach to solving this problem is a combination of the continuous thermodynamics of Rätsch and Kehlen and the lattice cluster theory of Freed et al. Here, the individual structural parameters of the LCT are replaced by their respective distributions. Previous work has already found that a continuous form over the segment length is possible. The aim of this work is to develop a continuous form of the lattice cluster theory, which is also able to consider the different degrees of branching. The model should further be implemented and tested with data from literature.

Contact: Dipl.-Ing. Gottfried Segner
segner@tugraz.at
+43 (316) 873 – 7460

Start: December 2021