COST ACTION GREENERING – DATA COLLECTION

First name, Family Name: Christoph Held
Type (Academic or Industrial): Academic
Country: Germany
Leadership position in the COST: Co-Leader of STSMs
Working Group in which you are involved: WG3
E-mail: christoph.held@tu-dortmund.de

Laboratory/Company: Laboratory of Thermodynamics, Department of Biochemical and Chemical Engineering

Laboratory/Company info:
The group focuses on thermodynamics of biomolecule solutions containing sugars, amino acids, peptides, electrolytes, ionic liquids, or macromolecules. The physico-chemical properties, phase behaviors, and reaction equilibria are investigated. Thermodynamic modeling allows for predicting the influence of additives (e.g. salts, buffer, pH, cofactors, enzymes) on the phase and reaction equilibria.

Link to the home page of the Laboratory/Company:
http://www.th.bci.tu-dortmund.de/cms/de/Aktuelles/

Fields of expertise (limited to 400 characters):
- Phase Equilibria
- Reaction Equilibria
- Reaction Kinetics
- Experiments and Thermodynamic Modelling

5 Main publications or patents:
- Held C.; Cameretti L. F.; Sadowski G.: Modeling aqueous electrolyte solutions - Part 1. Fully dissociated electrolytes, Fluid Phase Equilibria, vol. 270, pp. 87-96, 2008
- Held C.; Cameretti L. F.; Sadowski G.: Measuring and Modeling Activity Coefficients in Aqueous Amino-Acid Solutions; Industrial & Engineering Chemistry Research, vol. 50, pp. 131-141, 2011
- Held C.; Sadowski G.: Thermodynamics of Bioreactions, Annual Review of Chemical and Biomolecular Engineering, vol. 7, pp. 395-414, 2016
- Wangler A; Held C; Sadowski G: Thermodynamic Activity-Based Solvent Design for Bioreactions Trends in Biotechnology, vol. 37, pp. 1038-1041, 2019
- Chua Y. Z.; Do H. T.; Schick C.; Zaitsau D.; Held C.: New experimental melting properties as access for predicting amino-acid solubility, RSC Advances, vol. 8, pp. 6365-6372, 2018

Collaborations:
TU Eindhoven, INSA Rouen, Uni Erlangen, Uni Rostock, UFZ Leipzig, Uni Düsseldorf, Uni Regensburg, Uni Porto, Uni Lisbon, Uni Bochum, Uni Lulea, Uni Stutgart, Uni Santiago de Chile

Facilities:

- Calorimeters
- Osmometers
- Densitometers
- Chromatography (HPLC, GC, IC**)**