

Axel Schmidt (Dr.-Ing. In Process Engineering) is a Habilitand at the Institute for Separation and Process Technology at Clausthal University of Technology and has developed his PhD-Thesis on the topic of “Process integration using validated digital twins of liquid-liquid extraction processes for the recovery of metallic, botanical and biotechnological value components “ from October 2015 to the end of 2020 at Clausthal University of Technology at the Institute for Separation and Process Technology.

He lectures on Biotechnology as well as Separation Technology and Process Modeling. Mr. Schmidt operates and supervises the laboratory and pilot plant extraction equipment up to 1-2 l/h, i.e. a settler160 l hold-up piloting for cell separation and capture after cultivation at the institute.

At the institute Mr. Schmidt developed and established an industrial level extraction process development strategy and continuous processing for biologics and botanicals.

His research focuses on process development, integration, intensification, modeling and simulation with a focus on chromatography, distillation, liquid-liquid / solid-liquid extraction, precipitation, crystallization as well as filtration technologies. He is, at the moment, the coworker who has helped to acquire the most project money for the institute from industrial and national grant institutions.

His research aims to a methodological answer of upcoming FDA demands on meeting upscale requirements as well as batch or continuous manufacturing process options for biologicals and botanicals with innovative downstream concepts reducing COG significantly.