

**Current position**

Head of Research Group “Gasification” at Institute for Technical Chemistry, Department Gasification Technology (since 2009)
Deputy of department head Gasification Technology

Previous position

Development engineer / Project manager at Mann+Hummel GmbH, Ludwigsburg (2001-2009)

Scientific degree

Dr.-Ing. (PhD) in Chemical Process Engineering, BTU Cottbus (2000)

Recent research topics

Entrained flow gasification of biomass based fuels, experimental investigation of entrained flow gasification of suspension fuels, modelling of gasification sub-processes

Publications/Patents (5 most important)

- **S. Fleck, U. Santo, C. Hotz, T. Jakobs**, G. Eckel, M. Mancini, R. Weber, **T. Kolb**, Entrained Flow Gasification Part 1: Gasification of Glycol in an Atmospheric-pressure Experimental Rig, *Fuel* 217, 306 (2018) [doi:10.1016/j.fuel.2018.02.176](https://doi.org/10.1016/j.fuel.2018.02.176)
- G. Eckel, P. LeClercq, T. Kathrotia, A. Saenger, **S. Fleck**, M. Mancini, **T. Kolb**, M. Aigner, Entrained Flow Gasification, Part 3: Insight into the Injector Near-field by Large Eddy Simulation with Detailed Chemistry, *Fuel*, 223, 164 (2018) [doi:10.1016/j.fuel.2018.02.176](https://doi.org/10.1016/j.fuel.2018.02.176)
- P. Nau, P. Kutne, G. Eckel, W. Meier, C. Hotz, **S. Fleck**, Infrared Absorption Spectrometer for the Determination of Temperature and Species Profiles in an Entrained Flow Gasifier, *Applied Optics*. 56(11), 2982 (2017) [doi:10.1364/AO.56.002982](https://doi.org/10.1364/AO.56.002982)
- P. Kutne, M. Ebenhoch, W. Meier, **S. Fleck**, C. Hotz, Measurement of the Equivalence Ratio in an Atmospheric Gasifier Using Laser Induced Breakdown Spectroscopy, Imaging and Applied Optics Congress (2016) [doi:10.1364/LACSEA.2016.LM2E.2](https://doi.org/10.1364/LACSEA.2016.LM2E.2)
- **T. Jakobs**, N. Djordjevic, **S. Fleck**, M. Mancini, R. Weber, **T. Kolb**, Gasification of High Viscous Slurry R&D on Atomization and Numerical Simulation, *Applied Energy*, 93, 449 (2012) [doi:10.1016/j.apenergy.2011.12.026](https://doi.org/10.1016/j.apenergy.2011.12.026)