

Prof. Dr.-Ing. Thomas Wetzel



Current positions

Full Professor for Heat and Mass Transfer at the Institute of Thermal Process Engineering and Head of the Karlsruhe Liquid Metal Laboratory (KALLA) at KIT

Previous positions (two selected)

Behr (MAHLE) GmbH & Co. KG, Stuttgart, Department Head 3D Simulation Methods Development and Department Head Development/Testing Air Conditioning Systems Germany/Overseas (2004-2008)

Wacker Siltronic AG, Munich and Burghausen, Team Manager, Silicon Single Crystal Growth Modeling (2000-2004)

Scientific degrees

PhD in Electrical Engineering / Leibniz University of Hannover (2000)

Recent research topics

liquid metal thermal hydraulics and heat transfer, heat transfer in single- and multi-phase flow in complex geometries, thermal behavior of Li-ion batteries

Awards, honors, memberships

Innovation Price German Gas Industry (2018); Editorial Board VDI Heat Atlas (s. 2017), Board Member German Renewable Energy Association (s. 2017)

Publications/Patents (5 most important)

- **Th. Wetzel, R. Stieglitz, M. Daubner, S. Eckert, F. Stefani, D. Buchenau, Th. Wondrak**, Handbook on Lead-bismuth Eutectic Alloy and Lead Properties, Material Compatibility, Thermalhydraulics and Technology – Chap. Instrumentation. 2015 Edition, OECD-NEA https://inis.iaea.org/search/search.aspx?orig_q=RN:46133907
- **T. Geißler, A. Abánades, A. Heinzl, K. Mehravaran, G. Müller, R. K. Rathnam, C. Rubbia, D. Salmieri, L. Stoppel, S. Stückrad, A. Weisenburger, H. Wenninger, Th. Wetzel**, Hydrogen production via methane pyrolysis in a liquid metal bubble column reactor with a packed bed. Chem. Eng. J. (299), 192-200 (2016) [doi:10.1016/j.cej.2016.04.066](https://doi.org/10.1016/j.cej.2016.04.066)
- **K. Niedermeier, J. Flesch, L. Marocco, Th. Wetzel**, Assessment of thermal energy storage options in a sodium-based CSP plant. Appl. Thermal Eng. (107), 386-397 (2016) [doi:10.1016/j.applthermaleng.2016.06.152](https://doi.org/10.1016/j.applthermaleng.2016.06.152)
- **J. Pacio, L. Marocco, Th. Wetzel**, Review of data and correlations for turbulent forced convective heat transfer of liquid metals in pipes. Heat and Mass Transfer (51), 153-164 (2015) [doi:10.1007/s00231-014-1392-3](https://doi.org/10.1007/s00231-014-1392-3)
- **J. Pacio, Th. Wetzel**, Assessment of liquid metal technology status and research paths for their use as efficient heat transfer fluids in solar central receiver systems. Solar Energy (93), 11-22 (2013) [doi:10.1016/j.solener.2013.03.025](https://doi.org/10.1016/j.solener.2013.03.025)