

**Current position**

Head of Group “High-temperature Materials Chemistry” at Institute for Applied Materials, Applied Materials Physics (IAM-AWP), KIT (since 2008)

Previous positions

Microelectronics Research Center Erfurt (1989-1991)

Scientist at FZK (1991-2007)

Scientific degree

Dr. rer. nat. (PhD) in Solid State Chemistry, Friedrich-Schiller University of Jena (1989)

Recent research topics

High-temperature materials interactions, oxidation, nuclear safety of LWRs, materials behavior during LOCA and severe accidents, Accident-tolerant fuel (ATF) materials

Publications (5 most important)

- M. Steinbrueck, V. Angelici Avincola, I.J. Markel, U. Stegmaier, U. Gerhards, H.J. Seifert, Oxidation of SiC_f-SiC CMC cladding tubes for GFR application in impure helium atmosphere and materials interactions with tantalum liner at high temperatures up to 1600°C, *J. Nucl. Mater.* 517, 337 (2019) [DOI:10.1016/j.jnucmat.2019.02.024](https://doi.org/10.1016/j.jnucmat.2019.02.024)
- M. Kurata, M. Barrachin, T. Haste, M. Steinbrueck, Phenomenology of BWR fuel assembly degradation, *J. Nucl. Mater.* 500, 119 (2018) [DOI:10.1016/j.jnucmat.2017.12.004](https://doi.org/10.1016/j.jnucmat.2017.12.004)
- C. Tang, M. Stueber, H.J. Seifert, M. Steinbrueck, Protective coatings on zirconium-based alloys as accident-tolerant fuel (ATF) claddings, *Corr. Rev.* 35, 141 (2017) [DOI:10.1515/corrrev-2017-0010](https://doi.org/10.1515/corrrev-2017-0010)
- M. Steinbrueck, F.O. da Silva, M. Grosse, Oxidation of Zircaloy-4 in steam-nitrogen mixtures at 600–1200 °C, *J. Nucl. Mater.* 490, 226 (2017) <https://doi.org/10.1016/j.jnucmat.2017.04.034>
- M. Steinbrueck, U. Stegmaier, M. Grosse, Experiments on silver-indium-cadmium control rod failure during severe nuclear accidents, *Ann. Nucl. Energy* 101, 347 (2017) [DOI:10.1016/j.anucene.2016.11.039](https://doi.org/10.1016/j.anucene.2016.11.039)