

**Current positions**

Head of materials for power plants at the Institute of Energy and Climate Research 1 (IEK-1), FZJ, deputy director (since 2010)
Professorship at Ruhr University Bochum (since 2009)

Previous positions (two selected)

Guest professorship at University West, Trollhättan, Sweden (2010-15)
Scientist at IEK-1 (2004-10)

Scientific degrees

PhD in physics / RWTH Aachen (1990)
Habilitation Ruhr University Bochum (2004)

Recent research topics

Thermal spray technology; Protective high-temperature coatings (TBCs, EBCs, Abradables); Solid oxide fuel cells & membranes

Awards, honors, memberships

Fellow of ASM International (2019), Fellow of the American Ceramic Society (2017), Inductee in ASM/TSS Hall of Fame of Thermal Spray (2017), Editor of the Journal of the European Ceramic Society (since 2017), Offer of full-professorship at TU Berlin (2013),

Publications/Patents (5 most important)

- **R. Vaßen, N. Grünwald, D. Marcano, N.H. Menzler, R. Mücke, D. Sebold**, Aging of atmospherically plasma sprayed chromium evaporation barriers, *Surface and coatings technology* 291, 115 (2016) [doi:10.1016/j.surfcoat.2016.02.005](https://doi.org/10.1016/j.surfcoat.2016.02.005)
- **E. Bakan, R. Vaßen**, Ceramic top coats of plasma-sprayed thermal barrier coatings: materials, processes, and properties, *Journal of Thermal Spray Technology* 26 (6), 992-1010 (2017) [doi:10.1007/s11666-017-0597-7](https://doi.org/10.1007/s11666-017-0597-7)
- **J.E. Campbell, T. Kalfhaus, R. Vaßen, R.P. Thompson, J. Dean, T.W. Clyne**, Mechanical properties of sprayed overlayers on superalloy substrates, obtained via indentation testing, *Acta Materialia* 154, 237 [doi:10.1016/j.actamat.2018.05.043](https://doi.org/10.1016/j.actamat.2018.05.043)
- **E. Bakan, Y.J. Sohn, W. Kunz, H. Klemm, R. Vaßen**, Effect of processing on high-velocity water vapor recession behavior of Yb-silicate environmental barrier coatings, *Journal of the European Ceramic Society* 39 (4), 1507 (2019) [doi:10.1016/j.jeurceramsoc.2018.11.048](https://doi.org/10.1016/j.jeurceramsoc.2018.11.048).
- **A. Hospach, R. Vaßen, G. Mauer, K.-H. Rauwald, D. Stöver, K. Von Niessen, M. Gindrat**, Plasma Spray Method 2013, US Patent App. 13/768,040