



Alexander Kauffmann' short CV



Alexander Kauffmann obtained a diploma in Materials Science and Engineering with a Focus on functional materials at Dresden University of Technology (TUD) in 2009. During his studies, he joined the Metal Physics group of Prof. Jens Freudenberger at the Leibniz Institute for Solid State and Materials Research (IFW Dresden).

After the completion of his studies, Alex continued in the same group as a research associate. He completed his doctoral thesis under the supervision of Prof. Ludwig Schulz on the microstructure refinement by deformation twinning in copper and copper alloys at TUD in May 2014. Following his doctorate, Alex joined the Physical Metallurgy group of Prof. Martin Heilmaier at Karlsruhe Institute of Technology (KIT) where he later also served as a group leader. Since May 2025, he is appointed professor for Materials Science and Engineering at Ruhr University Bochum (RUB).

Alex' research focuses on fundamental mechanisms of microstructure formation and changes, as well as the material behavior of novel metallic and intermetallic alloys for extreme application conditions. He investigates material classes such as high-entropy alloys and refractory metal-based alloys. Application conditions include cryogenic temperatures, very high temperatures, and oxidizing atmospheres. The materials are designed based on model assumptions and thermodynamic calculations, and are manufactured, processed, and extensively examined in his group and with partners. The theoretical description of microstructure formation and changes, as well as their correlation with the properties of the produced materials, is conducted in a scale-bridging manner with national and international cooperation partners.

<https://www.lww.ruhr-uni-bochum.de/lww/team/ak.html.en>