



Dr. Volker Rose

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Dr. Volker Rose holds an advanced degree in physics (Dipl.-Phys.) and received a doctoral degree (Dr.rer.nat.) from RWTH Aachen, Germany in 2005. During this time he conducted research at Research Center Julich, the largest interdisciplinary research center in Europe. After a postdoctoral appointment at the Center for Nanoscale Materials (CNM), he joined the Microscopy Group at the Advanced Photon Source (APS) as Assistant Physicist in 2007. He was promoted to the rank of Physicist in 2012 and currently holds an interdivisional appointment between APS and CNM.

Dr. Rose's research focuses on the study of nanoscale materials by means of high-resolution x-ray microscopy techniques. He currently leads a team that develops a novel technique, which combines scanning probe microscopy with synchrotron x-rays ([SXSPM](#)). The goal is to achieve a fundamental understanding of nanoscale structures with both the ability to resolve nanometer structure and to provide detailed information about chemical, electronic, and magnetic state.

Dr. Rose's research achievements include a DOE Early Career Research Program Award in 2012, a prestigious R&D 100 Award in 2009, as well as an International Exchange Program Award, sponsored by U.S. Department of Energy and American Nuclear Society in 2004. In 2013, he was selected to participate in the Strategic Laboratory Leadership Program of The University of Chicago Booth School of Business.

Selected Publications:

V. Rose, K. Wang, T.Y. Chien, J. Hiller, D. Rosenmann, J.W. Freeland, C. Preissner, S.-W. Hla, "[Synchrotron X-Ray Scanning Tunneling Microscopy: Fingerprinting Near to Far Field Transitions on Cu\(111\) Induced by Synchrotron Radiation](#)", *ADVANCED FUNCTIONAL MATERIALS* 20, (2013) 2646.

V. Rose, J.W. Freeland, S.K. Streiffer, "[New Capabilities at the Interface of X-rays and Scanning Tunneling Microscopy](#)", in *Scanning Probe Microscopy of Functional Materials: Nanoscale Imaging and Spectroscopy*, S.V. Kalinin, A. Gruverman, (Eds.), SPRINGER, New York (2011), pg 405-432.

V. Rose, K. Brüggenmann, R. David, R. Franchy, "[Two-Dimensional Surface Magnetism in the Bulk Paramagnetic Intermetallic Alloy CoAl\(100\)](#)", *PHYSICAL REVIEW LETTERS* 98 (2007) 037202

