

PRESENTATION

Dr. Jörg Schuster

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Dr. Jörg Schuster studied physics (diploma 1997, PhD 2002) at Chemnitz University of Technology. Since 2009 he leads the modeling and simulation group at Fraunhofer ENAS. His main working field is the simulation of devices, processes, and materials for micro and nano electronics. One of his special research interests is the application of atomistic simulation methods. He is author or coauthor of more than 90 publications in international journals and conference proceedings.



"Overview of simulation concepts for atomic layer processing"

March 25, 2021 | 13:00 – 13:20

This presentation will give a quick overview on simulation concepts and methods, which are in use along with atomic layer processing. There is a broad variety of concepts and methods available covering aspects of atomic layer processing from the molecular up to the equipment scale. This overview will explain its possibilities, assets, and limitations.

Following the focus of the workshop, I will highlight the benefits of simulation methods from an application perspective. Simulation of ALD is useful for equipment manufacturers, people working with atomic layer process integration, or chemical companies developing new or improved precursors. By using computer simulations, we can analyze, visualize and optimize gas flows inside the chamber, identify critical process regimes or optimize process speed. I will illustrate this by a few application highlights from literature and our own research at Fraunhofer ENAS.