

Press Release

The ICR Keynote by Dr. Christoph Völker: AI as a Game Changer for Process Industries: Examples from R&D and Practice

Höhr-Grenzhausen, July 18, 2025

This central theme will kick off the 67th International Refractories Colloquium, which will take place in Aachen on September 17 and 18, 2025. In his keynote speech, Dr. Christoph Völker (iteratec GmbH) will discuss the rapid development of artificial intelligence in traditional production processes.

Dr. Völker will explain how artificial intelligence is transforming the process industry through practical applications. Using practical examples, the presentation will examine how machine learning approaches are addressing fundamental challenges: managing raw material variability, optimizing complex multi-parameter processes, and accelerating material development cycles.

ICR participants will gain insights into where AI is delivering concrete added value today, common mistakes to avoid, and practical approaches to integrating intelligent systems into existing R&D and production processes. The keynote combines technical insights with actionable guidelines and offers a well-founded perspective on how companies can use AI tools to increase performance and innovation.

Dr. Christoph Völker brings a unique combination of engineering precision and AI innovation to industrial transformation.

After completing his doctorate in AI applications in engineering and conducting research at universities in India and the USA, he was a visiting professor at TU Berlin, where he led international research teams in groundbreaking AI applications for sustainable materials science.

As Head of Sustainable Solutions, Dr. Völker now focuses on translating cutting-edge AI research into practical solutions for the process industry. The 600 experts at iteratec GmbH develop customized solutions, from digital twins for production optimization to AI-accelerated materials development platforms.

The International Refractories Colloquium (ICR[®]) is Europe's largest event for manufacturers and customers of steel, glass, and cement. It takes place annually in Aachen and includes a scientific conference, a trade fair for refractory manufacturers and suppliers of raw materials, machinery, services, and knowledge for the refractory industry, and an evening social gathering in the exhibition area.



Bild 1: Keynote Speaker Dr. Christoph Völker at ICR 2025