

Back to the Basics

The challenges of modern times do not stop at the ceramics and refractory industry: Refractory linings in kilns should improve the energy footprint, their components should be as sustainable as possible, process data should be digitally available, while the processes themselves should run almost automatically. All these requirements have to be met in the face of rising energy prices and tough global competition. This is no easy task: New ideas, new concepts and new materials are needed, and in a very limited time frame.

A guest commentary in this issue outlines proposals on how the brick industry can meet this challenges posed by the EU's climate protection plan up to the year 2050. This quickly brings up the fundamental question: Does the brick industry have a future

in Europe? Here it is time to find creative and individual solutions to secure the competitiveness of the sector.

This can also be applied to the refractory industry, where such progress can be achieved through further development of materials that contribute to more energy-efficient processes – and also through understanding the science behind them. Thermal insulation materials, for example, prevent unwanted heat exchange and save energy, but there is little systematic and structured information in the literature. However, a good application-oriented solution can only be developed on a solid scientific basis. So if we want to understand how energy-saving materials can be developed, we have to start at the very beginning: At the molecular level of thermal properties. ◀



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