

## Presentation of the Competence Center for Sustainable Energy Technologies KET-Prof. Kenig, Uni Paderborn

One of the main scientific challenges of our days is related to the emergence of step-change innovation of integrative energy management concepts and research-driven technology advancements with respect to supply-side measures, such as fuel switching and CO<sub>2</sub> capture. This can be achieved by simultaneously implementing different measures, e.g. energy savings, shift to sustainable energy sources, development of intelligent tools, mechanisms and structures, as well as by rigorous adherence to ecological requirements. This has been the main reason for the University of Paderborn to initiate a close collaboration of interdisciplinary groups within the energy technology area and to consolidate their efforts towards foundation of the Competence Center for Sustainable Energy Technologies (Kompetenzzentrum für Nachhaltige Energietechnik, KET).

The Competence Center has the following main targets:

- Acquiring a strong national position in the area of energy technology
- Evolving to the central contact point for the OWL industry with respect to energy-related problems
- Extending the curriculum via implementation of the relevant research results

It comprises four research groups from two different faculties, namely the Chair of Fluid Process Engineering led by Prof. Kenig and the Chair of Thermodynamics and Energy Technology led by Prof. Vrabec, both from the Faculty of Mechanical Engineering. The other two partner groups belong to the Faculty of Electrical Engineering, Computer Science and Mathematics, namely the Department of Power Electronics and Electrical Drives under Prof. Böcker and the Department of Electrical Energy Technology under Prof. Krauter. In the future, the Competence Center can join other university partners thus expanding its competence spectrum.

This contribution gives a brief presentation of the Competence Center for Sustainable Energy Technologies at the University of Paderborn, outlines the related expertise of the partners and the recent projects in the energy technology area. Furthermore, promising technological links between the partners are shown and relevant regional industrial branches are presented.