

Areas of Competence

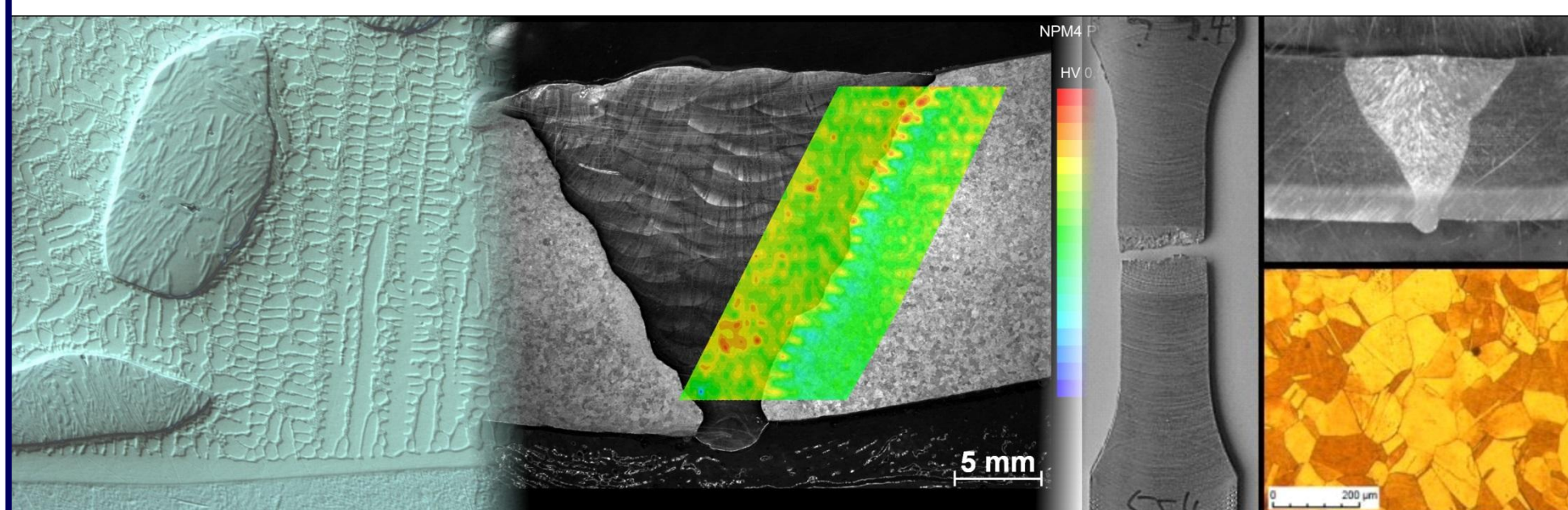
Joining Technology

- Development and Optimization of Welding Processes
- Calorimetry of Joining Processes
- Development of Hybrid Joining Technologies
- Process Automation, Sensing, Measuring



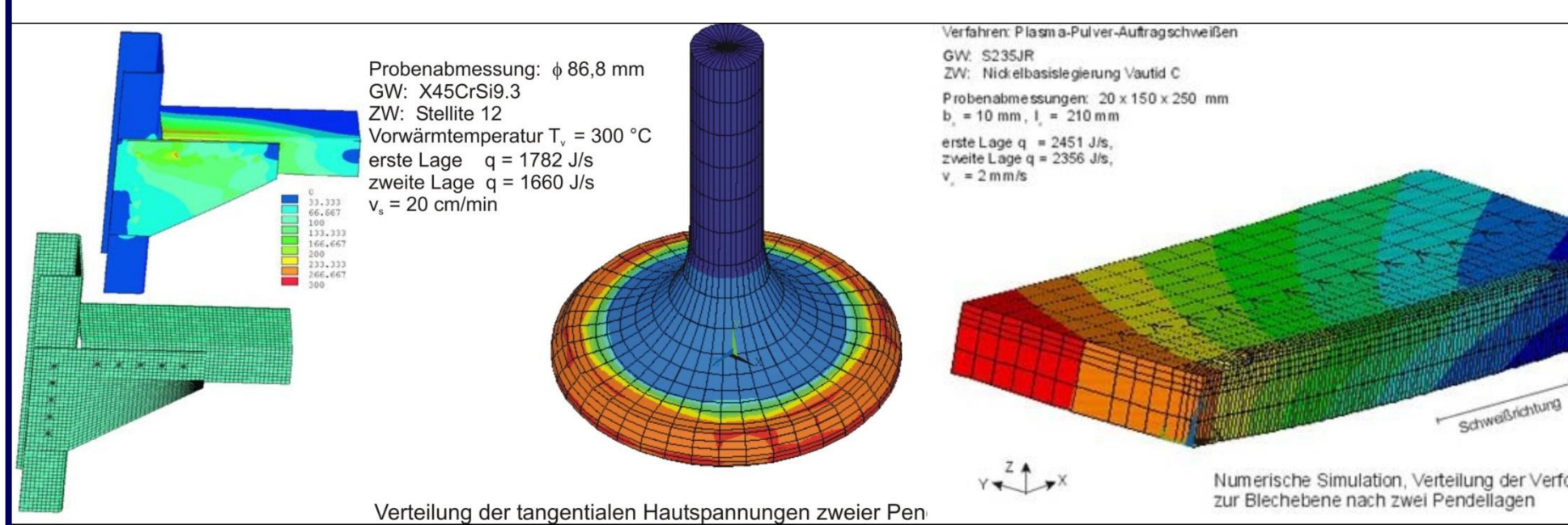
Materials and Welding

- Weldability of Materials
- Welding Metallurgy
- Microstructure- Property- Relationship
- Joining of Dissimilar Materials
steels, aluminum, magnesium, plastic,...



Component Safety

- Construction and Design
- Determination of Strength Parameters
- Stress Analyses / Simulation



Laboratory

- Microstructure Analysis
- Mechanical Testing
- Failure Analysis
- Consulting and Expertise

Equipment

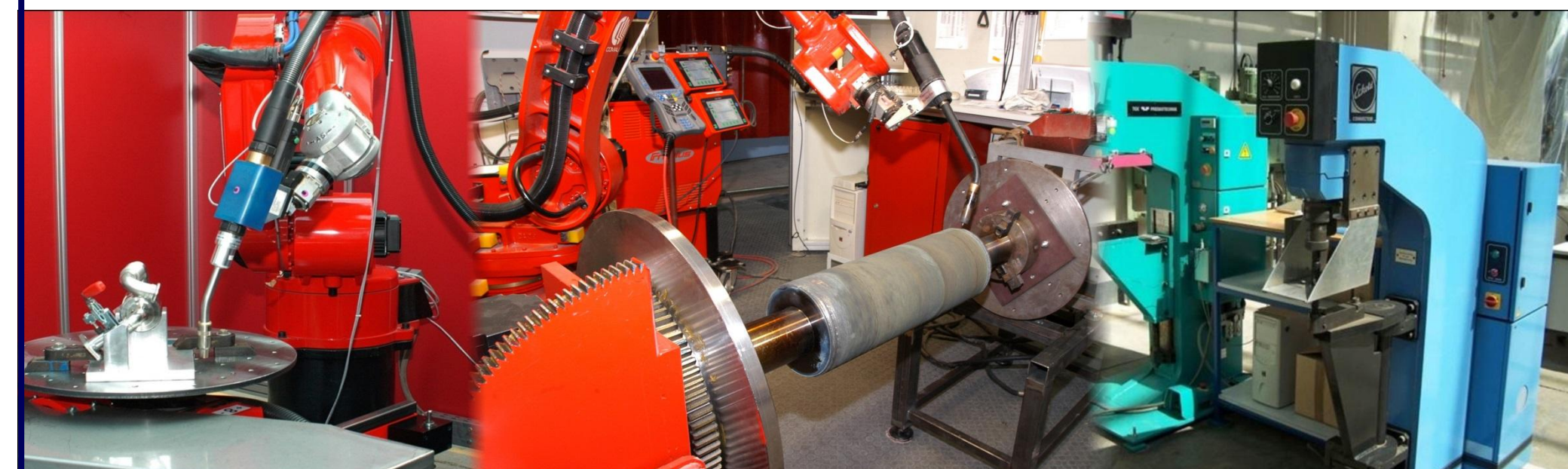
Joining Equipment

- Various Arc Welding Equipment (GMAW, TIG, PAW, SAW)
- Laser Beam Sources
- Diffusion Welding
- Resistance Welding
- Mechanical Joining (Clinching and Blind Riveting)



Automation

- Large Variety of Automation Solutions from 3 Axis Portal to 9 Axis Industrial Robots
- Software for Process Controlling
- Welding Guns for Automation



Measurement and Analyses

- High Speed Data Recording
- High speed Video Technology
- Energy Balancing - Calorimetry
- Welding Fume Analysator
- Thermography
- Dilatometer
- Static and Dynamic Mechanical Testing Machines

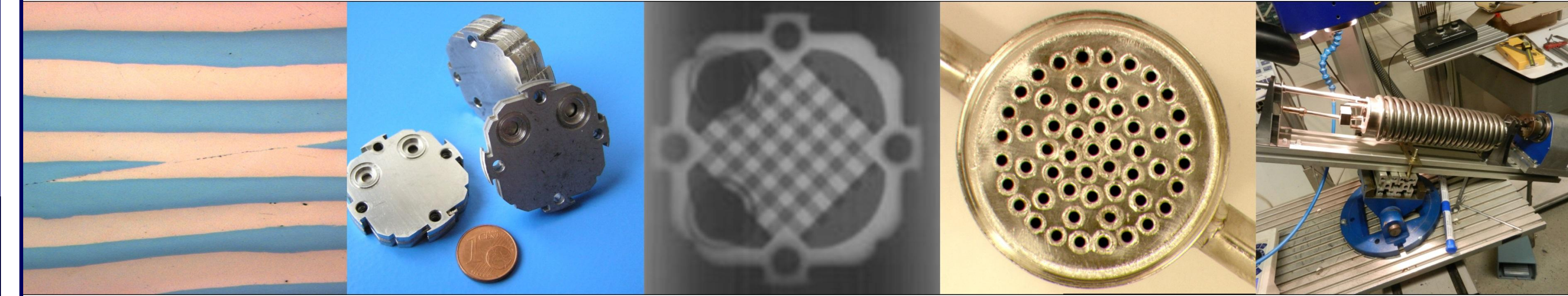


Kontakt

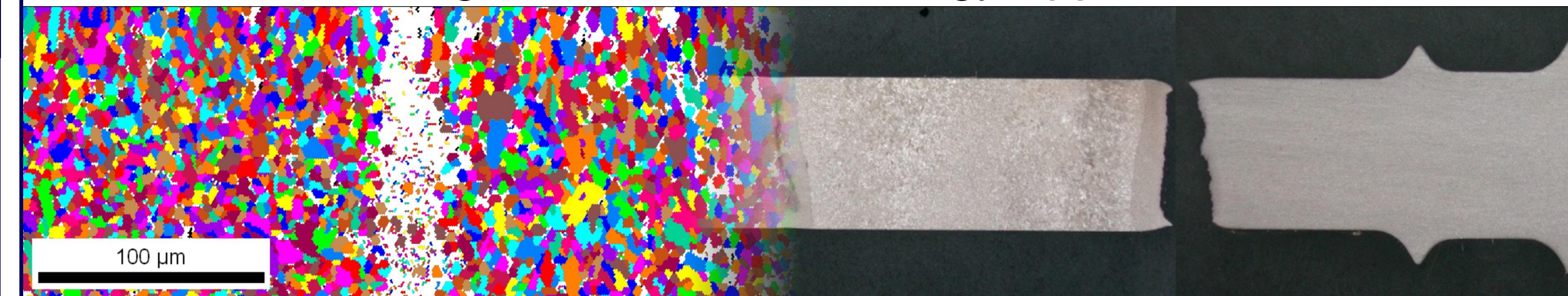
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Current Projects

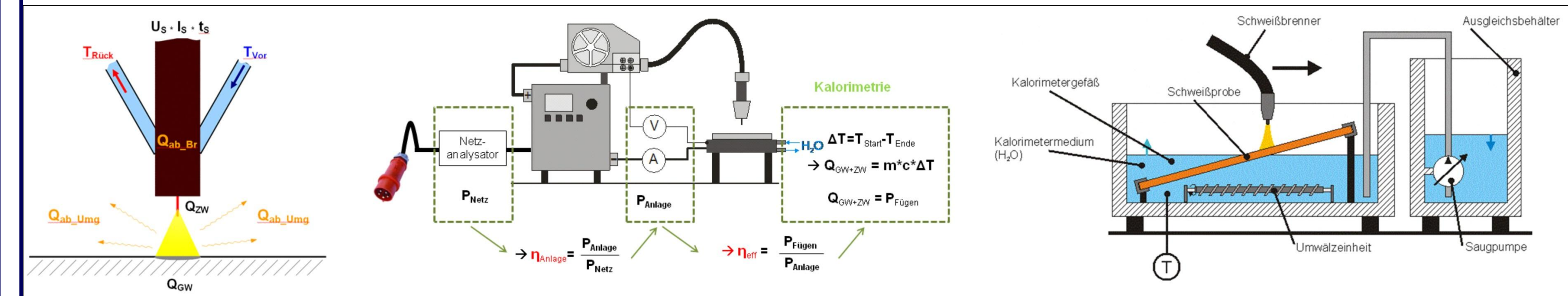
Diffusion and Laser based Joining for Micro - Components



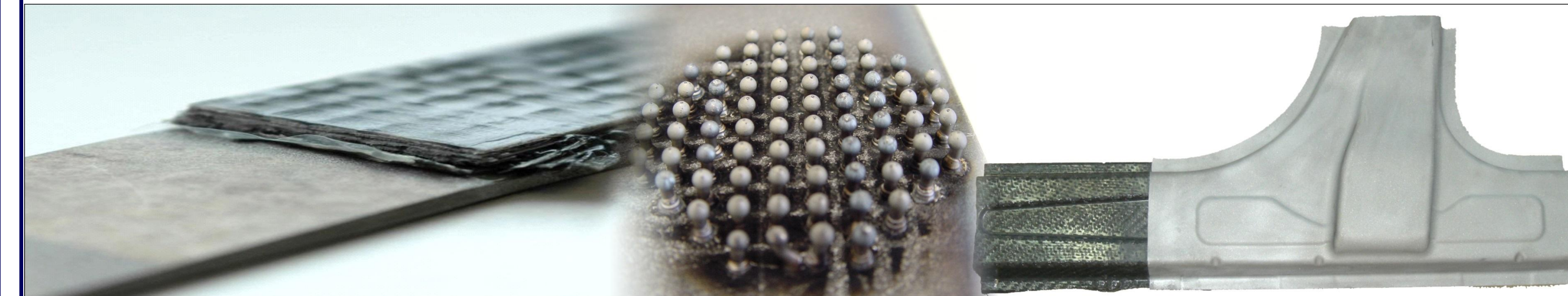
Joining of Materials for Energy Applications



Energy Efficiency of Joining Processes



Fabrication of Hybrid Components by Joining



Cladding and Modification of Highly Loaded Surfaces

