

# ZAE BAYERN IMPLEMENTING ENERGY RESEARCH

The Bavarian Center for Applied Energy Research

Dr.-Ing. Henri Schmit



## Mission and Vision

Since 1991, we have been engaged in

- research,
- practical implementation,
- education and training,
- counselling and information

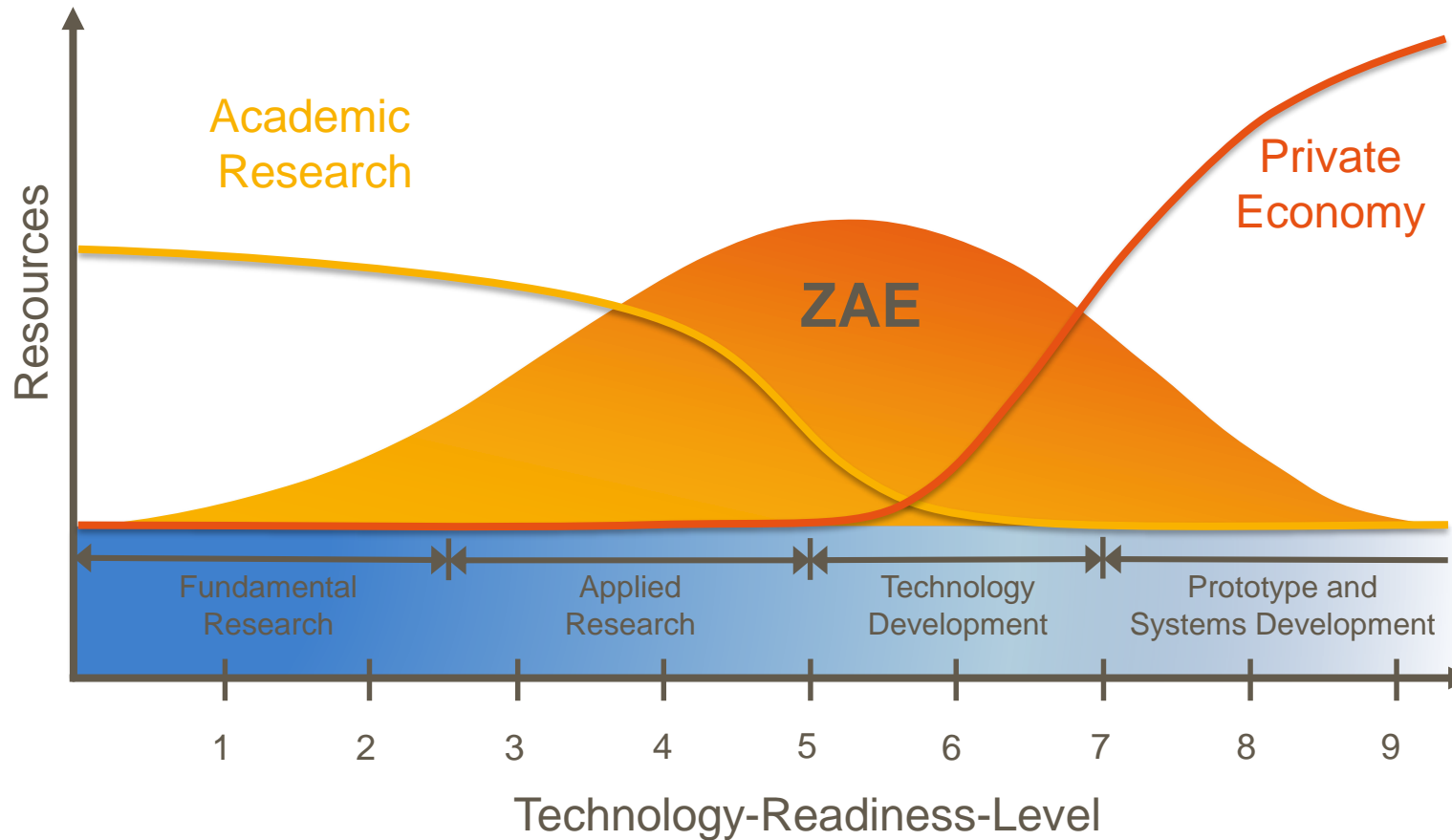
in all areas that carry significance for energy technology.



**Our goal:**  
**a CO<sub>2</sub>-neutral energy system**  
**through the use of renewable energy**  
**and increased energy efficiency**

# Our Research Profile

ZAE bridges the gap



between fundamental research and marketing new technologies.

# Our Research Groups



**Systems Engineering**  
Energy Concepts  
Studies and Scenarios



**Solar and Geothermal Energy**  
Solar District Heating  
Geothermal Energy



**Thermal Energy Storage**  
Heat and Cold  
Storage Media



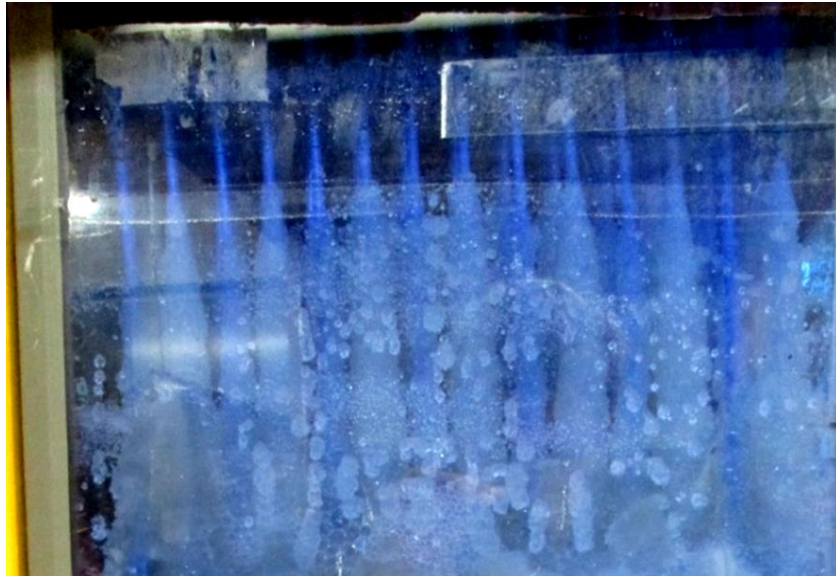
**Electrochemical Energy Storage**  
Redox-Flow Batteries  
Electrolysis



**Heat Conversion**  
Heat Pumps  
Chillers

# Our Research Group

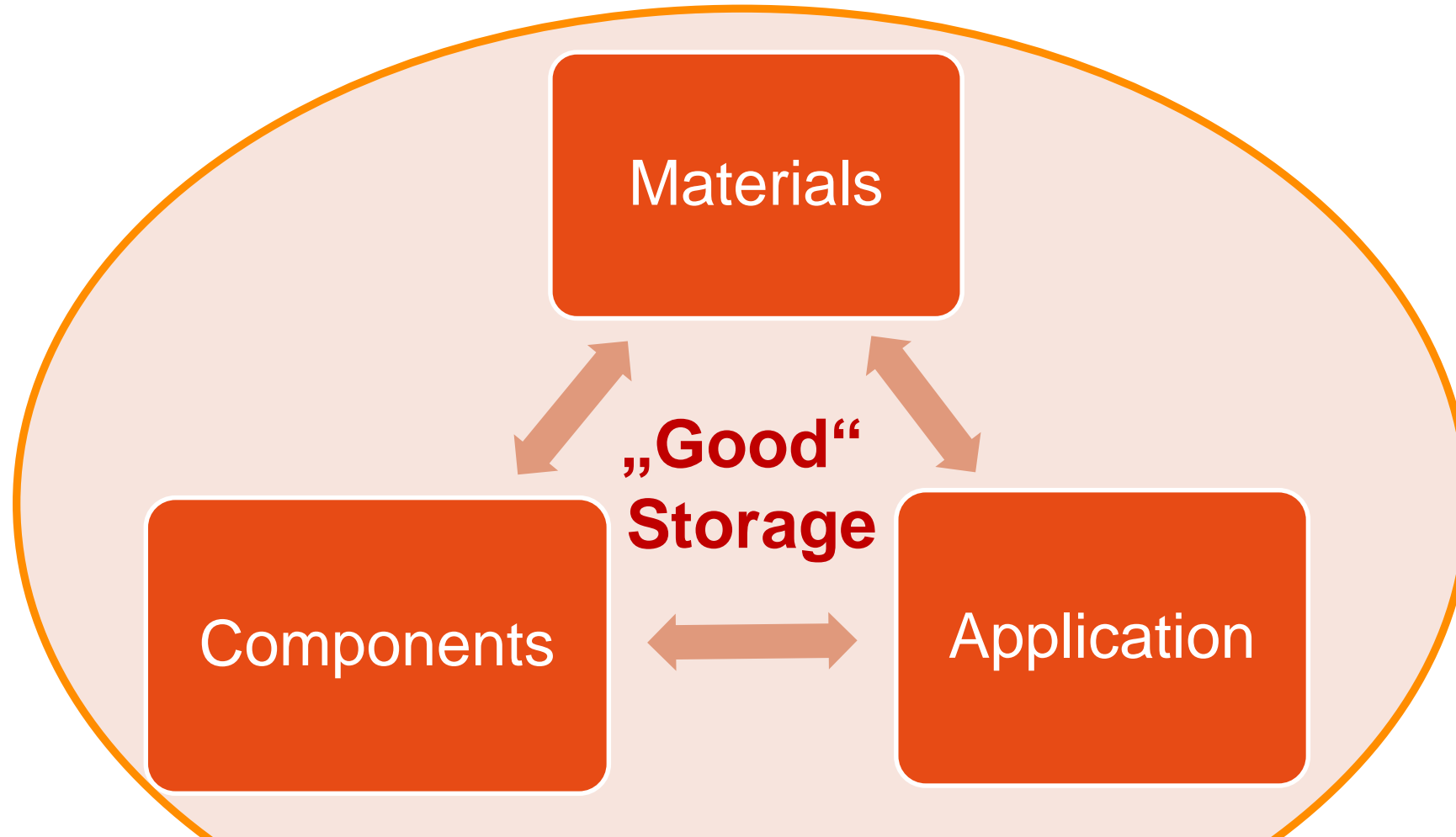
Latent heat storage  
with phase change materials (PCM)



Thermochemical heat storage (TCS)



# Our Approach

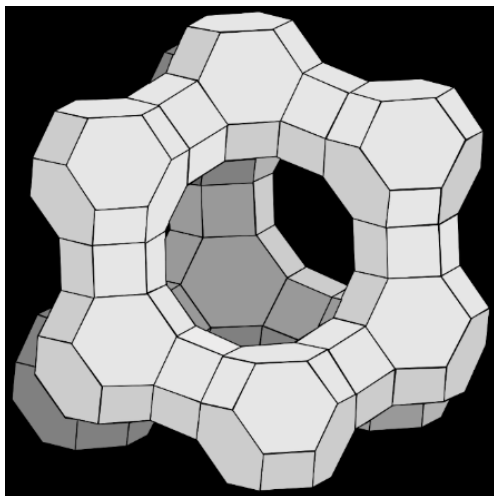


**TCS: > 30 years experience**

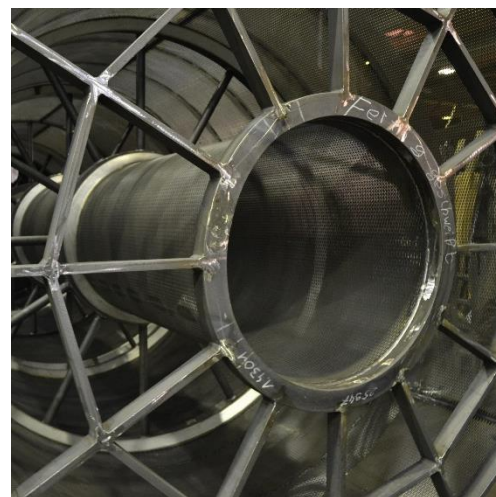
**PCM: > 25 years experience**



# Our Approach - Examples



From material...



...to component...



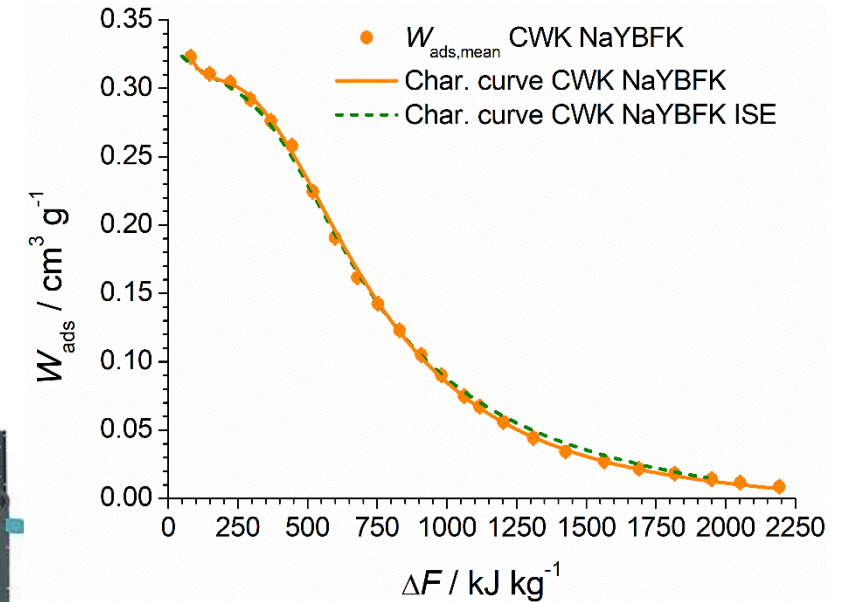
...to application



# Current Project Example: AMThES

## Application oriented material characterisation for thermochemical energy storage

- Material characterisation
- Identification of economically viable applications
- Material testing under application conditions





# Outlook

- Expansion of material characterisation



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- Upcoming project: Integration of a sorption system into industrial tumble dryers



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# Thank you for your attention!

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