



Bernhard Zettl

OFFSORE- Open Sorption Heat Storage

ISEC 2018, 4.10.2018, Graz



**RESEARCH &
DEVELOPMENT**

OFFSORE- Open Sorption Heat Storage (2016-2018)

Authors:

Dipl Ing. Dr. Bernhard Zettl¹, Dr. Harald Kirchsteiger¹ - FH-OÖ/ F&E
Dr.-Ing Henner Kerskes², Dipl.-Ing. Sebastian Asenbeck² – ITW/ Uni Stuttgart,

Project partners (in alphabetical order):

AIT- Austrian Institute of Technology (Vienna),
ECOTHERM Austria GmbH (Hartkirchen),
HAITHERM Industrieofenbau und Wärmebeh. GmbH (Walding),
IFK-Schüttgut-Technik GmbH (Haibach o.d. Donau),
ITW- Institute of Thermodynamics and Thermal Engineering (Univ. Stuttgart),
SOLAR- LAUS (Linz).

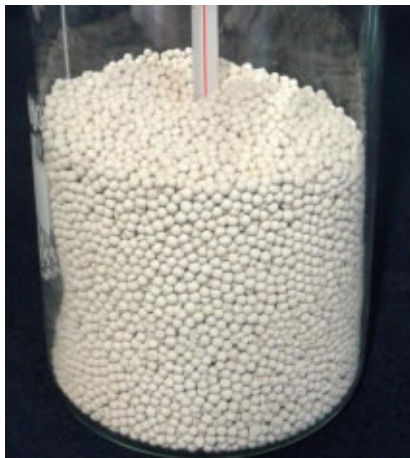
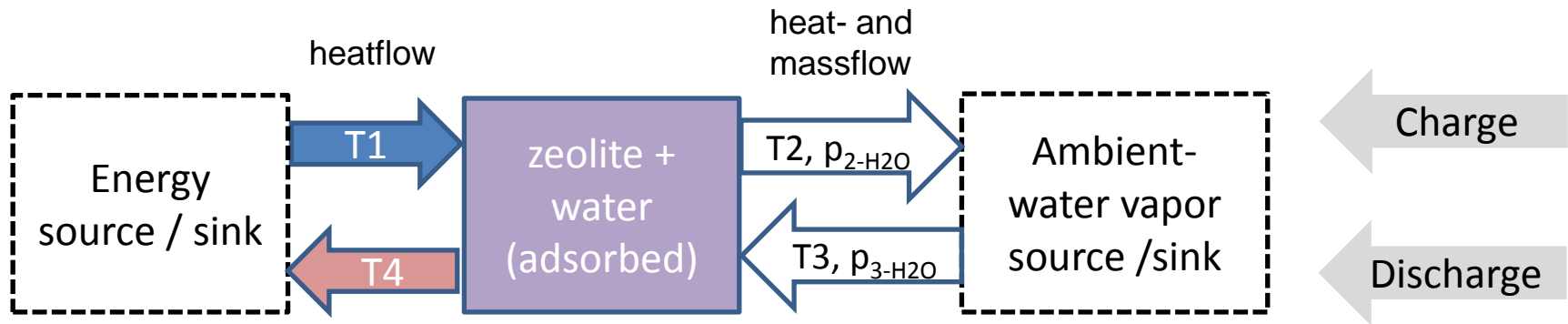
OFFSORE is a cooperative research project (2016-2018) with public funding.

The author thanks the **Austrian Research Promotion Agency (FFG)** for financial support of the project.

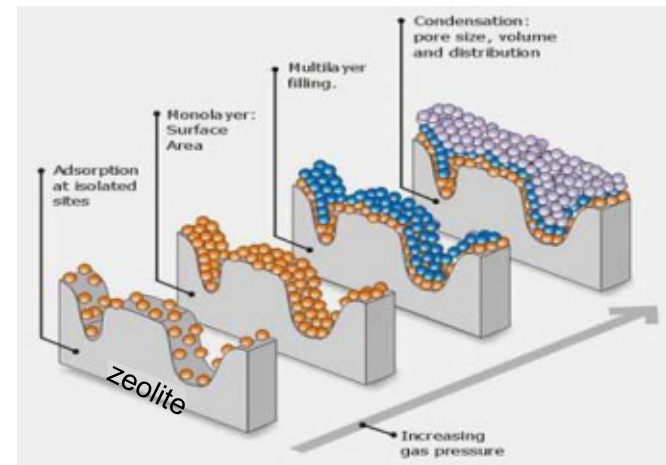


Open sorption function principle

Open system with air as carrier for humidity and heat



Typ A



Open sorption prototype

with full process control and automated material handling !

Advantages:

- Ability to use zeolite and salt-based material
- Easy controllable (low heat-capacity)
- Thermal power and energy are disconnected

Drawbacks:

- High material stability required
- High temperatures for desorption

