

Subtopic 4.3: Thermal Energy Storage

Dr. Inga Bürger

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Current position

Researcher and project leader at Institute for Engineering Thermodynamics, Group of Thermochemical Systems (since 2014)

Previous position

Research assistant and PhD student, Institute for Engineering Thermodynamics, Hydrogen Storage in Complex Hydrides, DLR (2009-2014)

Scientific degree

Dr.-Ing. (PhD) in Process Engineering University of Stuttgart (2014)

Recent research topics

Metal hydrides for high thermal power, hydrogen storage and getter applications. Reactor Design and Modeling.

Awards, honors, memberships

“Innovation Award” of the DWV (German Hydrogen and Fuel-Cell Association) (2014)

Publications (5 most important)

- **I. Bürger**, J.J. Hu, J.G. Vitillo, G.N. Kalantzopoulos, S. Deledda, M. Fichtner, M. Barricco, **M. Linder**, Material properties and empirical rate equations for hydrogen sorption reactions in $2 \text{LiNH}_2\text{-}1.1 \text{MgH}_2\text{-}0.1 \text{LiBH}_4\text{-}3 \text{wt.}\% \text{ZrCoH}_3$, *Int J Hydrogen Energ* (2014) [doi:10.1016/j.ijhydene.2014.02.120](https://doi.org/10.1016/j.ijhydene.2014.02.120)
- M. Lutz, M. Bhourri, **M. Linder**, **I. Bürger**, Adiabatic magnesium hydride system for hydrogen storage based on thermochemical heat storage: Numerical analysis of the dehydrogenation, *Appl Energ* (2019) [doi:10.1016/j.apenergy.2018.12.038](https://doi.org/10.1016/j.apenergy.2018.12.038)
- **Bürger**, L. Komogowski, **M. Linder**, Advanced reactor concept for complex hydrides: Hydrogen absorption from room temperature, *Int J Hydrogen Energ* (2014) [doi:10.1016/j.ijhydene.2014.02.070](https://doi.org/10.1016/j.ijhydene.2014.02.070)
- C. Weckerle, **I. Bürger**, **M. Linder**, Novel reactor design for metal hydride cooling systems, *Int J Hydrogen Energ* (2017) [doi:10.1016/j.ijhydene.2017.01.066](https://doi.org/10.1016/j.ijhydene.2017.01.066)
- M. Bhourri, **I. Bürger**, Numerical investigation of H_2 absorption in an adiabatic high-temperature metal hydride reactor based on thermochemical heat storage: MgH_2 and $\text{Mg}(\text{OH})_2$ as reference materials, *Int J Hydrogen Energ* (2017) [doi:10.1016/j.ijhydene.2017.05.123](https://doi.org/10.1016/j.ijhydene.2017.05.123)