

Subtopic 4.2: Concentrating Solar Power (CSP)

Dr. Reiner Buck

ORCID: 0000-0002-3821-9409



Current positions

Head of the Department “Solar Tower Systems” at Institute of Solar Research, DLR (since 2011)

Previous position

Head of Group “Solar High Temperature Systems” at Institute of Technical Thermodynamics, DLR (since 2003)

Co-Founder of Spin-Off company HelioHeat (2017)

Scientific degree

Dr.-Ing. (PhD) in Energy Technology (2000)

Recent research topics

Concentrating solar power systems, solar receiver development, system optimization, heliostat development, power conversion systems

Publications (5 most important)

- **W. H. Stein, R. Buck** (2017) Advanced power cycles for concentrated solar power. *Solar Energy*, 152, pp. 91-105. Elsevier. doi:10.1016/j.solener.2017.04.054 [doi:10.1016/j.solener.2017.04.054](https://doi.org/10.1016/j.solener.2017.04.054)
- **W. Wu, D. Trebing, L. Amsbeck, R. Buck, R. Pitz-Paal** (2015) Prototype Testing of a Centrifugal Particle Receiver for High-Temperature Concentrating Solar Applications. *Journal of Solar Energy Engineering*, 137. American Society of Mechanical Engineers (ASME). [doi:1115/1.4030657](https://doi.org/10.1115/1.4030657)
- **W. Wu, R. Uhlig, R. Buck, R. Pitz-Paal** (2015) Numerical Simulation of a Centrifugal Particle Receiver for High-Temperature Concentrating Solar Applications. *Numerical Heat Transfer; Part A: Applications*, 68 (2), pp. 133-149. Taylor & Francis [doi:10.1080/10407782.2014.977144](https://doi.org/10.1080/10407782.2014.977144)
- **B. Gobereit, L. Amsbeck, R. Buck, R. Pitz-Paal, M. Röger, H. M. Müller-Steinhagen** (2015) Assessment of a Falling Solid Particle Receiver with Numerical Simulation. *Solar Energy*, 2015 (115), pp. 505-517. Elsevier. [doi:10.1016/j.solener.2015.03.013](https://doi.org/10.1016/j.solener.2015.03.013)
- **C. Singer, S. Giuliano, R. Buck** (2014) Assessment of Improved Molten Salt Solar Tower Plants. *Energy Procedia*, 49, pp. 1553-1562. Elsevier. [doi:10.1016/j.egypro.2014.03.164](https://doi.org/10.1016/j.egypro.2014.03.164)