

**Current position**

Head of Fusion Ceramics, Institute for Applied Materials - Energy Storage Systems (IAM-ESS) KIT (since 2015)

**Previous positions (two selected)**

Head of Department Ceramics, IAM - Material Process Technology (IAM-WPT) (2007-2014)

Acting Head of IAM-WPT (2011-2013)

**Scientific degrees**

Diploma in Mineralogy, University of Münster (1985)

Dr. rer. nat. (PhD) University of Münster (1988)

**Recent research topics**

Ceramic tritium breeding materials, development, characterization, qualification, and process technology

**Awards, honors, memberships**

Member of SOFT International Organizing Committee,  
EU member of IEA IA NTFR - subtask group on solid breeder blanket

**Publications (5 most important)**

- O. Leys, M.H.H. Kolb, A. Pucci, R. Knitter, Study of lithium germanate additions to advanced ceramic breeder pebbles, *J. Nucl. Mater* 518, 234 (2019) [doi:10.1016/j.jnucmat.2019.03.010](https://doi.org/10.1016/j.jnucmat.2019.03.010)
- M. Zmitko, P. Vladimirov, R. Knitter, M. Kolb, O. Leys, et al., Development and qualification of functional materials for the European HCPB TBM, *Fusion Eng. Des.* 136, 1376 (2018) [doi:10.1016/j.fusengdes.2018.05.014](https://doi.org/10.1016/j.fusengdes.2018.05.014)
- J.M. Heuser, M.H.H. Kolb, T. Bergfeldt, R. Knitter, Long-term thermal stability of two-phased lithium orthosilicate/metatitanate ceramics, *J. Nucl. Mater* 507, 392 (2018) [doi:10.1016/j.jnucmat.2018.05.010](https://doi.org/10.1016/j.jnucmat.2018.05.010)
- S. Pupleschi, R. Knitter, M. Kamlah, Effective thermal conductivity of advanced ceramic breeder pebble beds, *Fusion Eng. Des.* 116 73 (2017) [doi:10.1016/j.fusengdes.2017.01.026](https://doi.org/10.1016/j.fusengdes.2017.01.026)
- O. Leys, T. Bergfeldt, M.H.H. Kolb, R. Knitter, A.A. Goraieb, The reprocessing of advanced mixed lithium orthosilicate/metatitanate tritium breeder pebbles, *Fusion Eng. Des.* 107, 70 (2016) [doi:10.1016/j.fusengdes.2016.04.025](https://doi.org/10.1016/j.fusengdes.2016.04.025)
- K. Mukai, P. Pereslavytsev, U. Fischer, R. Knitter, Activation calculations for multiple recycling of breeder ceramics by melt processing, *Fusion Eng. Des.* 100, 565 (2015) [doi:10.1016/j.fusengdes.2015.08.007](https://doi.org/10.1016/j.fusengdes.2015.08.007)