

FUSION TOPIC 4: PLASMA-WALL INTERACTIONS

Prof. Dr. Wolfgang Biel

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Current positions

Project leader “DEMO development” and deputy director at Institute of Energy and Climate Research - Plasma Physics (IEK-4), FZJ (since 2013)
Visiting Professor, Ghent University, Belgium (since 2014)
EUROfusion project leader “DEMO diagnostic and control” (since 2014)

Previous positions

Project leader for “Development of Prototype Components for ITER” at IEK-4 (Plasma Physics), FZJ (2007-2013)
Research Scientist at IEK-4 (Plasma Physics), FZJ (1997-2007)

Scientific degree

Dr. rer. nat. (PhD) in Plasma Physics, University Düsseldorf (1996)

Awards, honours, memberships

Member of the EFDA Power Plant Physics and Technology Board (2011-2013)
Member of the Int. Progr. Adv. Comm., IAEA DEMO Progr. Workshop (since 2012)
Member of the F4E technical advisory panel (since 2013; since 2018 vice-chair)

Recent research topics

Fusion plasma diagnostics and control, DEMO reactor systems studies

Publications/Patents (5 most important)

- **W. Biel**, M. de Baar, **A. Dinklage**, F. Felici, **R. König**, et al., DEMO diagnostics and burn control, *Fusion Eng. Des.* 96, 8 (2015) [doi:10.1016/j.fusengdes.2015.01.046](https://doi.org/10.1016/j.fusengdes.2015.01.046)
- G. Federici, **C. Bachmann**, **W. Biel**, **L. Boccaccini**, **F. Cismondi**, et al., Overview of the design approach and prioritization of R&D activities towards an EU DEMO, *Fusion Eng. Des.* 109-111, 1464 (2016) [doi:10.1016/j.fusengdes.2015.11.050](https://doi.org/10.1016/j.fusengdes.2015.11.050)
- **R. Wenninger**, R. Kembleton, **C. Bachmann**, **W. Biel**, T. Bolzonella, et al., The physics and technology basis entering European system code studies for DEMO, *Nucl. Fusion* 57, 016011 (2017) [doi:10.1088/0029-5515/57/1/016011](https://doi.org/10.1088/0029-5515/57/1/016011)
- **W. Biel**, **M. Beckers**, R. Kemp, **R. Wenninger** and **H. Zohm**, Systems code studies on the optimization of design parameters for a pulsed DEMO tokamak reactor, *Fusion Eng. Des.* 123, 206 (2017) [doi:10.1016/j.fusengdes.2017.01.009](https://doi.org/10.1016/j.fusengdes.2017.01.009)
- **M. Beckers**, **W. Biel**, **M. Tokar**, **U. Samm**, Investigations of the first-wall erosion of DEMO with the CELLSOR code, *Nucl. Materials and Energy* 12, 1163 (2017) [doi:10.1016/j.nme.2017.01.006](https://doi.org/10.1016/j.nme.2017.01.006)