

**Current position**

Project Leader “ITER Core CXRS Diagnostics Development”, Institute of Energy and Climate Research – Plasma Physics (IEK-4), FZJ (since 2012)

Previous positions (three selected)

Project Leader of the Bulk-tungsten Divertor row for the JET tokamak in the frame of the ITER-like Wall (2006-2011)

Deputy Leader of the DES Project for an endoscope on JET-ILW (2008-2012)

Chairman of the Final Design Review of the Full-W Divertor Variant for ITER (2013)

Scientific degree

Dr. rer. nat (PhD) in Plasma Physics, Ruhr-University Bochum (1987)

Recent research topics

CXRS (Charge-Exchange Recombination Spectroscopy) technologies and physics, rhodium materials, tungsten materials, tungsten divertor, Plasma-Wall Interaction

Awards, honors, memberships

- Local Organizing Committee of the 27th SOFT, Liege, Belgium (2012)
- Member of the Council of Studies of the *Engineers in Physics*, Faculty of Applied Sciences, University of Liege, Belgium (since 2017)

Publications

- **Ph. Mertens**, R. Boman, **S. Dickheuer**, **Yu. Krasikov**, **A. Krimmer**, et al., On the use of rhodium mirrors for optical diagnostics in ITER, *Fus. Engin. Des.* (2019) in press, [doi:10.1016/j.fusengdes.2019.04.031](https://doi.org/10.1016/j.fusengdes.2019.04.031)
- **A. Krimmer**, I. Balboa, N.J. Conway, M. De Bock, ...**Ph. Mertens**, et al., Design status of the ITER core CXRS diagnostic setup, *Fus. Engin. Des.* (2019) in press, [doi:10.1016/j.fusengdes.2018.12.026](https://doi.org/10.1016/j.fusengdes.2018.12.026)
- **A. Panin**, A. Alekseev, **Ph. Mertens**, T. Schioler, Engineering Methodology to Provide Integrity of the ITER Port Plug on-board Components Dynamically Responding to Plasma Transients Combined with Seismic Events, *IEEE Transact. Plasma Sci.* 47, 1453 (2018) <https://doi.org/10.1109/TPS.2018.2886053>
- **Ph. Mertens**, The Core-Plasma CXRS Diagnostic for ITER: An Introduction to the Current Design, *J. Fus. Energy* (2018) [doi:10.1007/s10894-018-0202-1](https://doi.org/10.1007/s10894-018-0202-1)
- **S. Dickheuer**, **O. Marchuk**, ..., **Ph. Mertens**, **A. Kreter**, In situ measurements of the spectral reflectance of metallic mirrors at the H-alpha line in a low density Ar-H plasma, *Rev. Sci. Instr.* 89, 063112 (2018) [doi:10.1063/1.5024995](https://doi.org/10.1063/1.5024995)