

Abstract Submitted
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Process Diagnostics and Monitoring Using the Multipole Resonance Probe (MRP)¹ J. HARHAUSEN, Leibniz Institute for Plasma Science and Technology, P. AWAKOWICZ, R.P. BRINKMANN, Ruhr-Universität Bochum, R. FOEST, Leibniz Institute for Plasma Science and Technology, M. LAPKE, T. MUSCH, T. MUSSENBROCK, J. OBERRATH, Ruhr-Universität Bochum, A. OHL, Leibniz Institute for Plasma Science and Technology, I. ROLFES, CH. SCHULZ, R. STORCH, T. STYRNOLL, Ruhr-Universität Bochum — In this contribution we present the application of the MRP in an industrial plasma ion assisted deposition (PIAD) chamber (Leybold optics SYRUS-pro). The MRP is a novel plasma diagnostic which is suitable for an industrial environment - which means that the proposed method is robust, calibration free, and economical, and can be used for ideal and reactive plasmas alike [1]. In order to employ the MRP as *process diagnostics* we mounted the probe on a manipulator to obtain spatially resolved information on the electron density and temperature. As *monitoring tool* the MRP is installed at a fixed position. Even during the deposition process it provides stable measurement results while other diagnostic methods, e.g. the Langmuir probe, may suffer from dielectric coatings.

[1] Lapke et. al., Appl. Phys. Lett. **93**, 051502 (2008)

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Jens Harhausen

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