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Application of laser-induced breakdown spectroscopy for characterization of impurities deposits and deuterium retention in fusion devices

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Abstract

Recently Laser Spectroscopic Plasma Diagnostic approaches have been developed to in-situ measure the plasma wall interaction (PWI) for the fusion devices such as in EAST, HL-2A/M and TEXTOR tokamaks. The laser based diagnostic technologies such as Laser-Induced Breakdown Spectroscopy (LIBS), Laser Induced Adsorption Spectroscopy (LIAS) have been established at laboratory for the linear machine firstly and as well as in Tokomaks. The developed diagnosis approaches play significant role as the unique and useful diagnostic tools for the measurement PWI processes such as H/D retention, impurities deposition, as well as lithium wall conditioning in the fusion devices like EAST, HL-2A/M, TEXTOR as well as W7-X. The more details will be presented in the conference.

References

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