

Time resolved plasma diagnostics for pulsed 2.45 GHz hydrogen discharges

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Abstract-

A review of the last ten years of advances in temporal resolved plasma diagnostics for pulsed operated 2.45 GHz microwave-driven hydrogen discharges is presented. Special attention has been paid to the study of breakdown and decay processes where some particular phenomena are explored for application in ion sources. Measurements of plasma temperature and density using vacuum ultraviolet spectroscopy, ultra-fast photography, and ion mass spectroscopy are performed in detail, including examples and results.

Index Terms-

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