

Abstract Submitted
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Development of a Laser Thomson Scattering Diagnostics System for Dielectric Barrier Discharge Plasmas NIMA BOLOUKI, Interdisciplinary Graduate School of Engineering Science, Kyushu University, KENTARO TOMITA, YUKIHIKO YAMAGATA, KIICHIRO UCHINO — Dielectric barrier discharge is a type of discharge at around atmospheric pressure. The presence of dielectric layer on electrode leads to the formation of enormous micro discharges of nanoseconds between two electrodes. Characteristics of the DBD plasmas have not yet been understood well. That is because diagnostics of micro discharges forming the DBD plasmas are very difficult due to their short life times (< 100 ns) and small sizes (< 100 μm). In this paper, we created DBD plasmas in needle-hemispherical structure. Teflon layer as a dielectric is coated on hemispherical electrode. In order to obtain DBD plasma parameters, we have been trying to apply the LTS method to DBD plasmas.

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