Keep-in-Touch meeting
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Experimental study of the effect of different electrode configurations on CO_2 splitting in atmospheric pressure dielectric barrier discharges

Chao Wang

Instituto de Plasmas e Fusão Nuclear, Instituto Superior Técnico, Universidade de Lisboa, Lisboa, 1049, Portugal

The CO_2 splitting performance in atmospheric pressure dielectric barrier discharges using different electrode configurations is investigated. The effects of dielectric barrier materials and electrode configurations with and without copper mesh electrode on CO_2 splitting are studied by electrical characterization and optical emission spectral of dielectric barrier discharge plasma. The results show that the use of a dielectric barrier with a higher relative permittivity and the electrode setup with a copper mesh electrode inserted into the gas gap can significantly improve the CO_2 conversion, which provides a reference for improving the dielectric barrier discharge reactor design.