Figure 4

Single-frequency operation (N = 1) of the COST-jet: Spatio-temporal plots of the electron density (first row) and the electric field (second row) for different driving frequencies as obtained from the simulations. The positions of the sheath edges are shown as solid black lines in (d)-(f). The powered electrode is located at x = 0, while the grounded electrode is at x = 1 mm. The peak-to-peak value of the driving voltage is Vpp = 500 V. The He flow is 1000 sccm with an N2 admixture concentration of 0.1 %.

Experimental data are marked as Experiment

Simulated data is marked as Simulation

x [t/TRf] , y[mm]

(Figure3a-3c): Simulated electron density for N2-admixtures of 1 sccm and different applied frequency of 12MHz, 18MHz and 28MHz respectively with N=1

(Figure3d-8f): Simulated electric field for N2-admixtures of 1 sccm and different applied frequency of 12MHz, 18MHz and 28MHz respectively with N=1, additionally the simulated plasma sheaths are added as black lines