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Direct and indirect NO removal with (sub)nanosecond pulses: yield and by-product formation

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In this contribution we show results of direct and indirect removal of nitric oxide (NO) with (sub)nanosecond pulses. The nanosecond pulse source is the 0.5-10-ns, 0-50-kV (positive and negative), 0.2-ns rise time pulse source that we recently developed at Eindhoven University of Technology. The direct-removal setup is an in-plasma removal setup, where the polluted air (with NO) is flushed directly through a pulsed corona plasma generated with the nanosecond pulses. In the indirect-removal setup, we generate ozone in clean air in the corona plasma reactor and mix this with the polluted gas stream after the plasma reactor. In this method, NO is removed by reaction with ozone and not directly in the plasma. We report on removal yields and by-product formation.

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