

In-duct Grating-like Dielectric Barrier Discharge System for Air Disinfection

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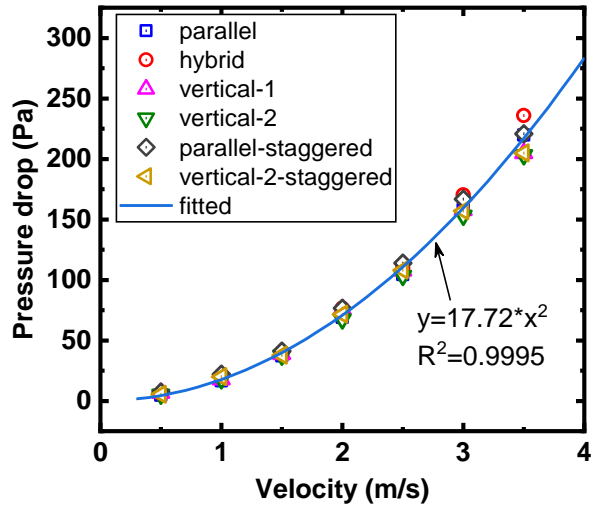


Figure S1. The pressure drops across the plasma reactors as a function of inlet airflow velocity. The average data were fitted by a parabolic function ($y=k \cdot x^2$, $R^2=0.9995$).

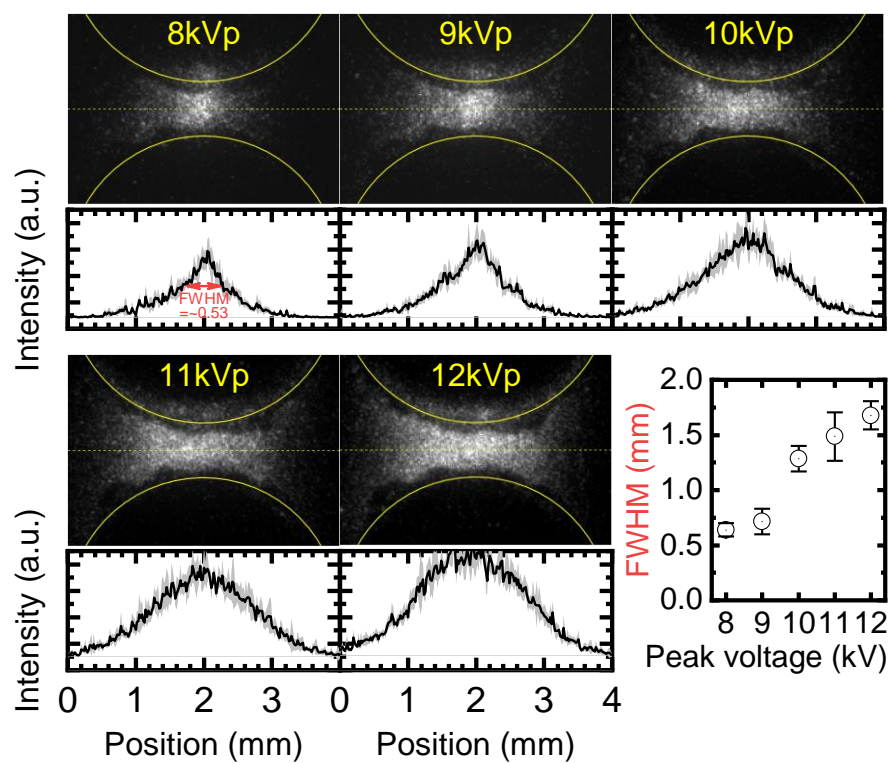


Figure S2. ICCD images of discharge filaments of pair-wise electrodes from the side view with 1 ms exposure time. The full width at half maxima (FWHM) values of the discharge filaments as a function of applied voltage is also shown. **Under higher applied voltages, the accumulation of discharge filaments leads to a wider emission region.**

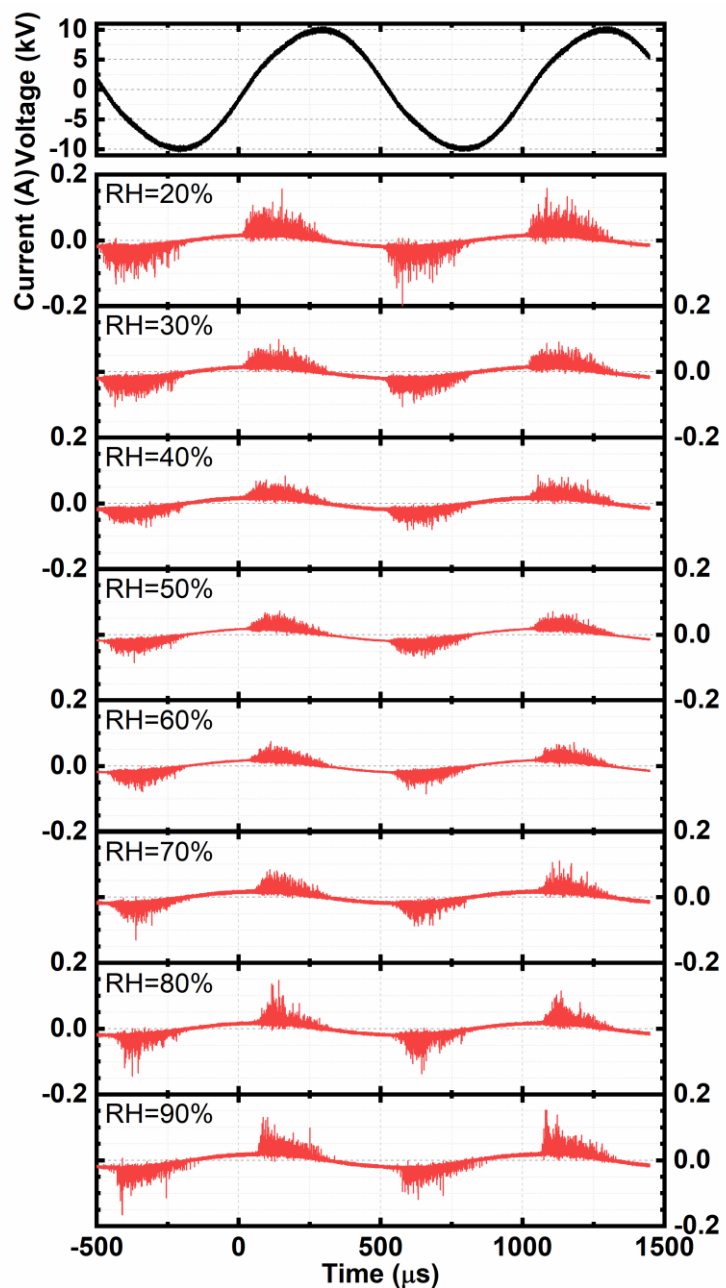


Figure S3. The voltage and current waveforms of the vertical-2 reactor as a function of RH levels. The voltage was fixed at 10 kVp.

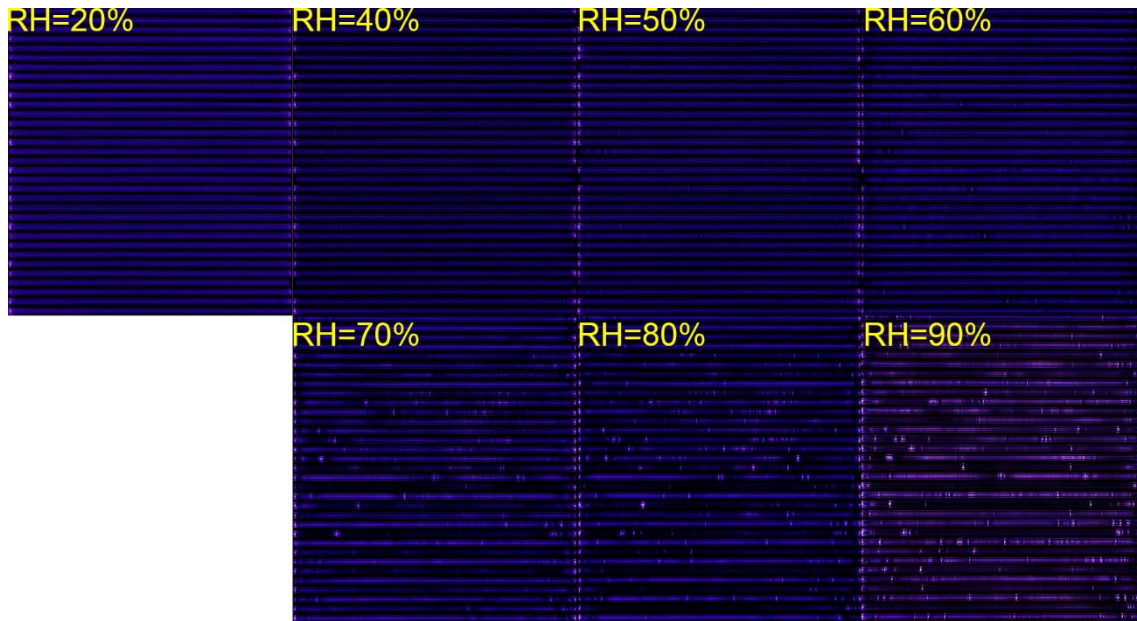


Figure S4. Discharge photos of 'vertical-1' DBD reactor at different relative humidity (RH) levels. The peak voltage is 10 kVp and the frequency is 1 kHz. The exposure time is 30 s. **Clearly, discharge uniformity is disrupted under high RH values (>60%).**

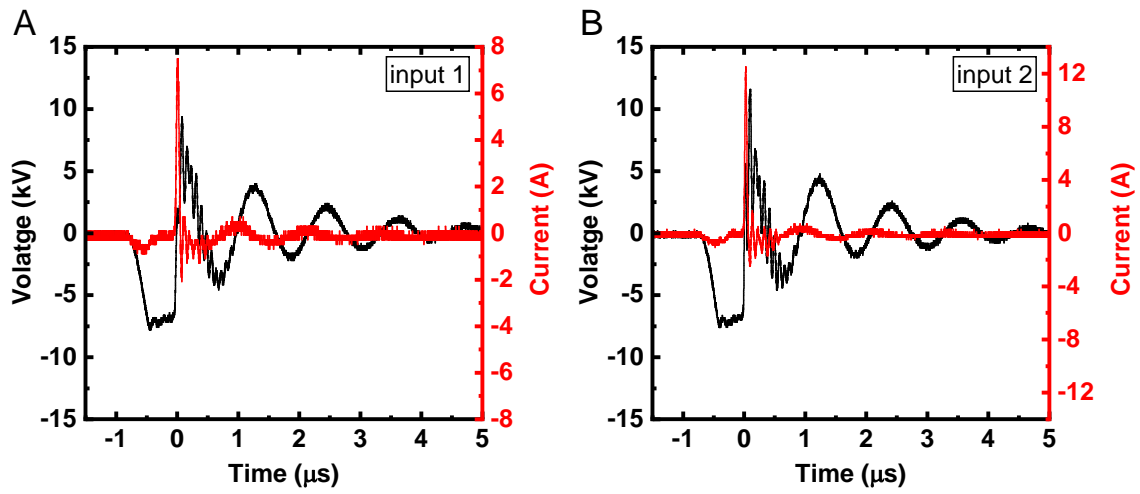


Figure S5. The voltage and current waveforms of the pulsed power source output. The frequency is fixed at 1 kHz. 'Input-1' and 'input-2' corresponds to peak voltages of 9.4 and 11.6 kV, respectively.