

## Supporting Information:

### Quantification of impurities in diatomite via sensitivity-improved calibration-free laser-induced breakdown spectroscopy

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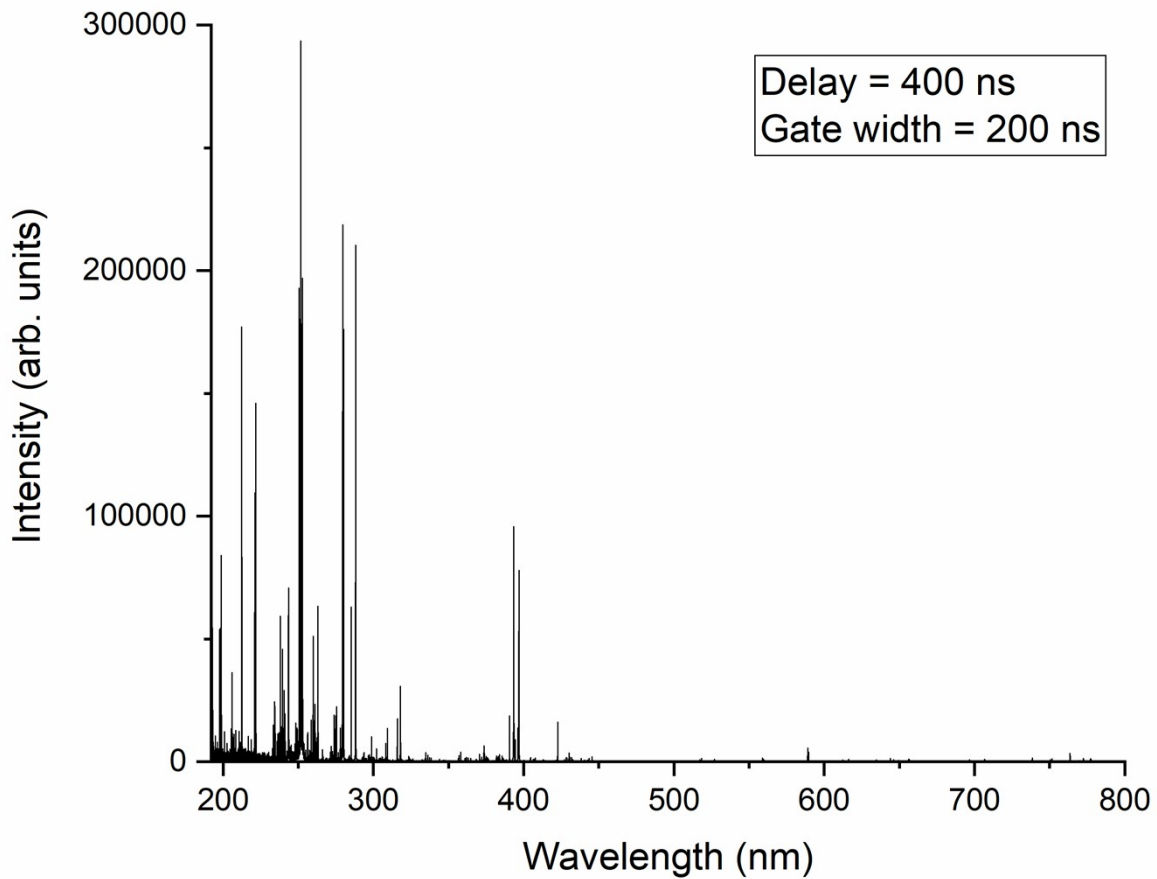
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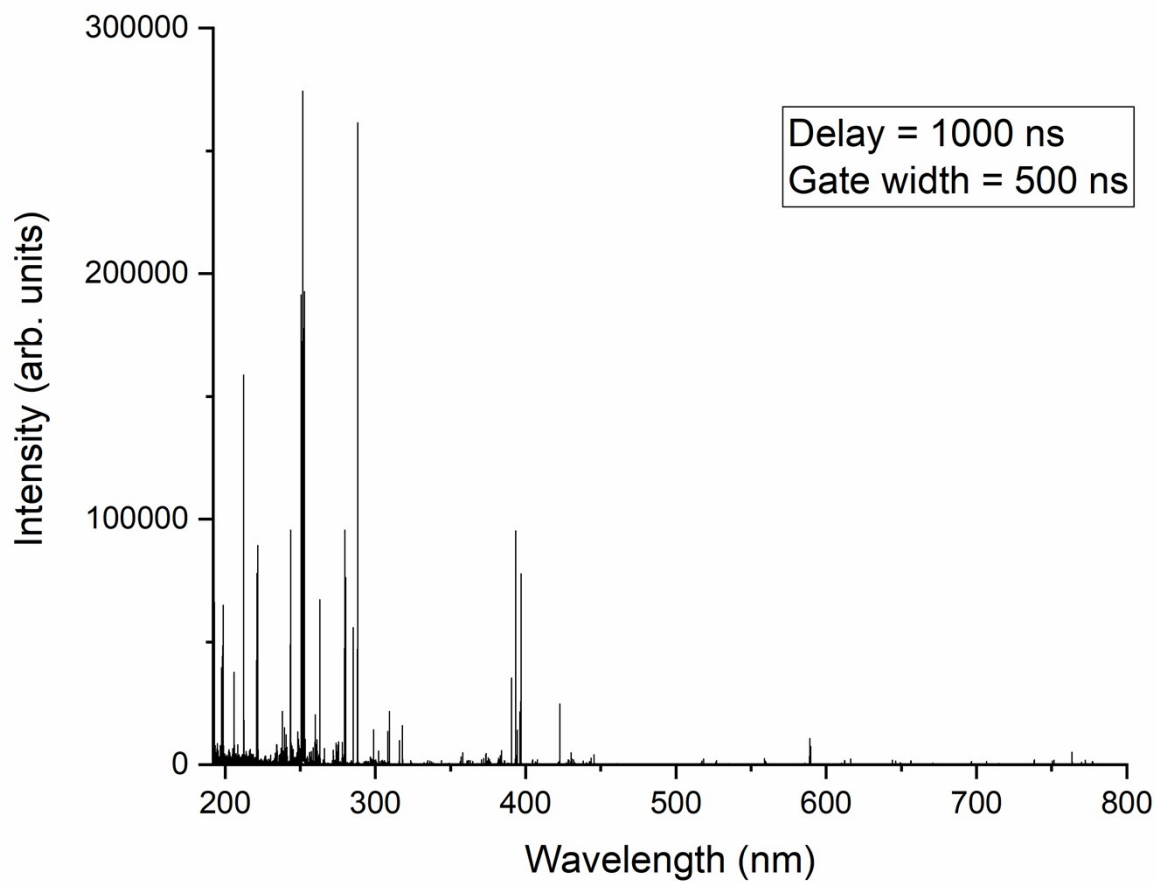
Fig. S2 Measured spectrum with a 1000 ns delay and a 500 ns gate width. Data file: Measured spectrum with 1000ns delay and 500ns gate width.txt . . . . . S-3

# 1. Measured spectra

The spectra were recorded with delays of the detector gate with respect to the laser pulse  $t_{delay} = 400$  ns (see Fig. S1) and 1000 ns (see Fig. S2). The gate width  $\Delta t_{gate}$  was chosen to  $\Delta t_{gate} = \frac{t_{delay}}{2}$  as a compromise between the smallest available variation of plasma properties during the time of observation and the highest reachable signal-to-noise ratio<sup>1</sup>. The data acquisition was performed by averaging over 480 ablation events, irradiating 160 sites on the sample surface with 3 laser pulses each. The sites were separated by a distance of 150  $\mu\text{m}$ .



**Fig. S1** Measured spectrum with a 400 ns delay and a 200 ns gate width. Data file: Measured spectrum with 400ns delay and 200ns gate width.txt



**Fig. S2** Measured spectrum with a 1000 ns delay and a 500 ns gate width. Data file: Measured spectrum with 1000ns delay and 500ns gate width.txt

## References

1. J. Hermann, *Laser Induced Breakdown Spectroscopy (LIBS) Concepts, Instrumentation, Data Analysis and Applications*, 2023, **1**, 89-121.