Electronical Supporting Information (ESI) for:

Combustion generated nanomaterials: online characterization via an ICP-MS based technique. Part I: calibration strategy with a TGA.

D. Foppiano,^{a,c} M. Tarik,^a E. Gubler Müller^b and C. Ludwig^{a,c}

^{a.} Bioenergy and Catalysis Laboratory (LBK), Energy and Environment Research Division (ENE), Paul Scherrer Institut (PSI), 5232 Villigen PSI, Switzerland. E-mail: debora.foppiano@psi.ch

 ^{b.} Laboratory of Biomolecular Research (LBR), Biology and Chemistry Division (BIO), Paul Scherrer Institut (PSI), 5232 Villigen PSI, Switzerland.
^{c.} Environmental Engineering Institute (IIE), School of Architecture, Civil and Environmental Engineering (ENAC), École polytechnique fédérale de Lausanne(EPFL), CH 1015 Lausanne, Switzerland



Fig. S1 Thermochemical calculation on ZnCl₂ evaporation with HSC software. The grey area highlighted represents the range of temperatures investigated.



Fig. S2 Evaporation studies on ZnCl₂ powder at constant heating rate (5°C min⁻¹) between 25-600 °C



Fig. S3 Temperature program TGA during experiment with ZnCl₂ powder



Fig. S4 Weight loss profile corresponding to temperature program reported above for ZnCl₂ experiments



Fig. S5 Thermochemical calculation on ZnO and $CaCl_2$ system with HSC software. The grey area highlighted represents the range of temperatures investigated.



Fig. S6 Temperature program TGA during experiment with ZnO and $CaCl_2$ powder



Fig. S7 Volume-related size distribution and ⁶⁶Zn ICP-MS Intensity contour plots of a repetitive analysis with the same operating conditions like the sample in Fig.4. The results show that the PSDs follow the same trend with an RSD for small particles (<20 nm) and bigger particles (>50nm) of about 10%.