

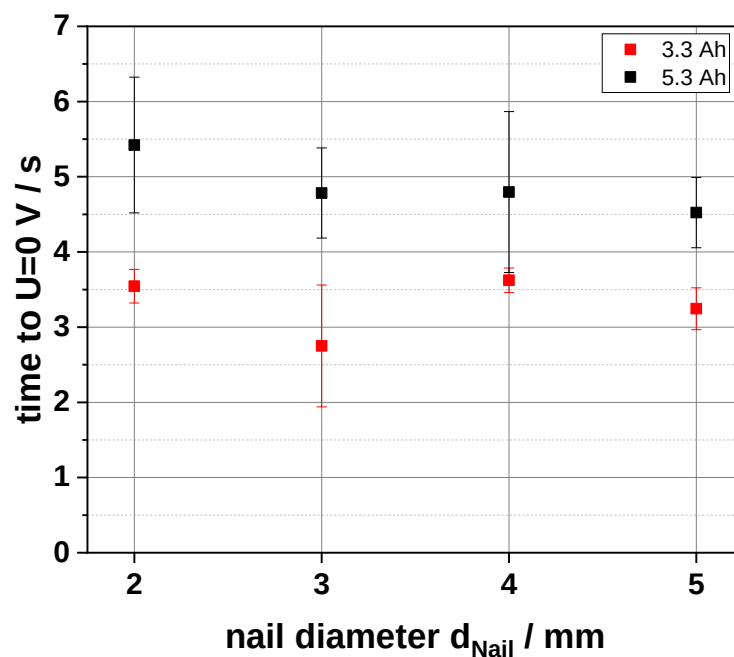


Figure S1. Average time to cell voltage $U_{Cell} = 0$ V depending on the nail geometry (2–5 mm) used in mm for 3.3 and 5.3 Ah battery cells.

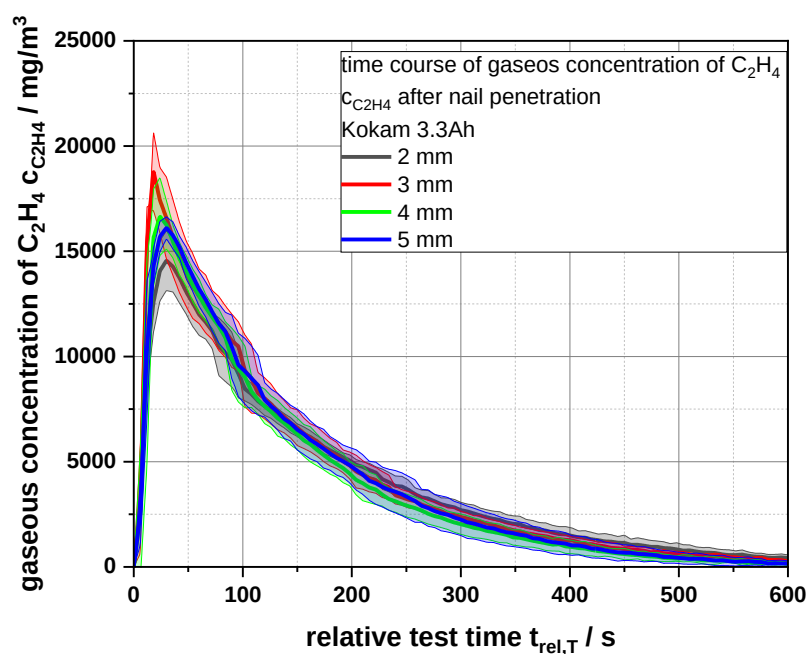


Figure S2. Average gaseous concentrations of C_2H_4 $c_{C_2H_4}$ as a function of the relative test time $t_{rel,T}$ of 3.3 Ah cell for different nail geometries from 2 to 5 mm.

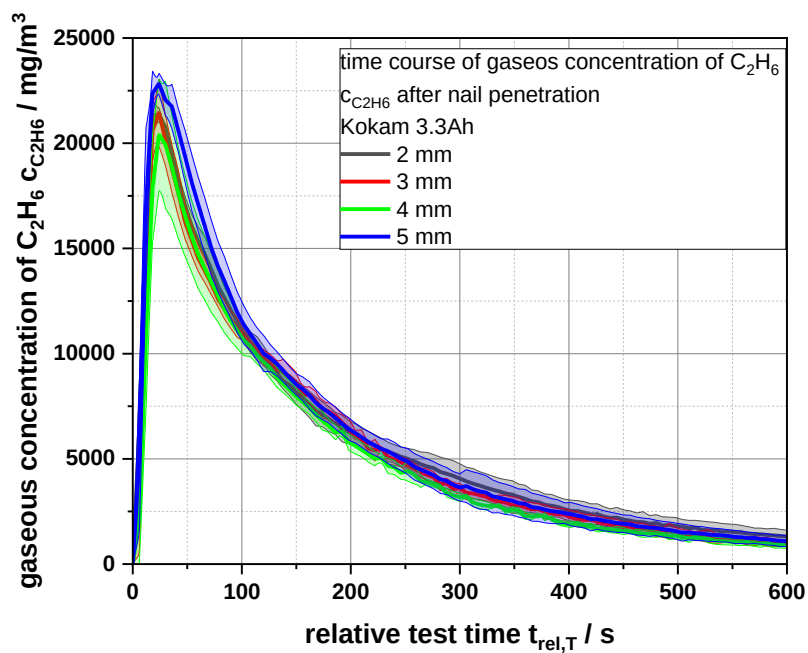


Figure S3. Average gaseous concentrations of C_2H_6 as a function of the relative test time $t_{rel,T}$ of 3.3 Ah cell for different nail geometries from 2 to 5 mm.

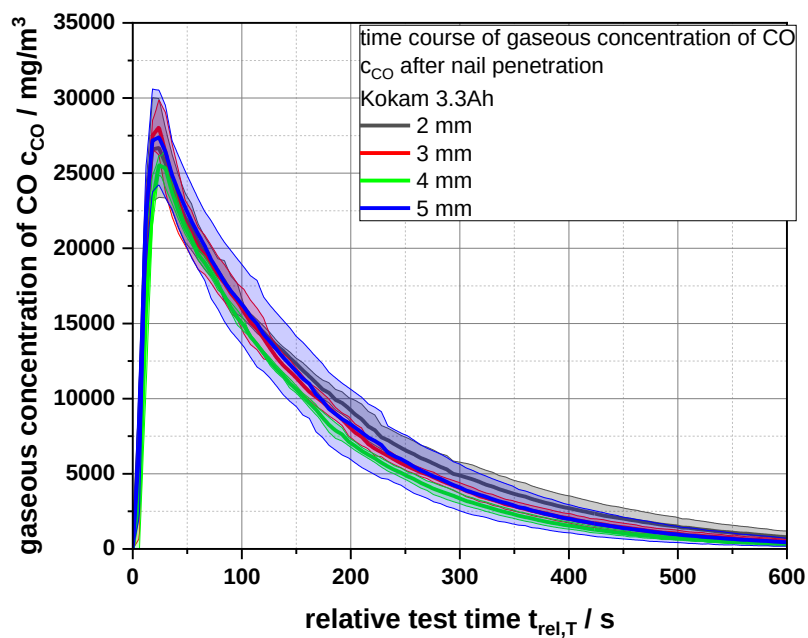


Figure S4. Average gaseous concentrations of CO as a function of the relative test time $t_{rel,T}$ of 3.3 Ah cell for different nail geometries from 2 to 5 mm.

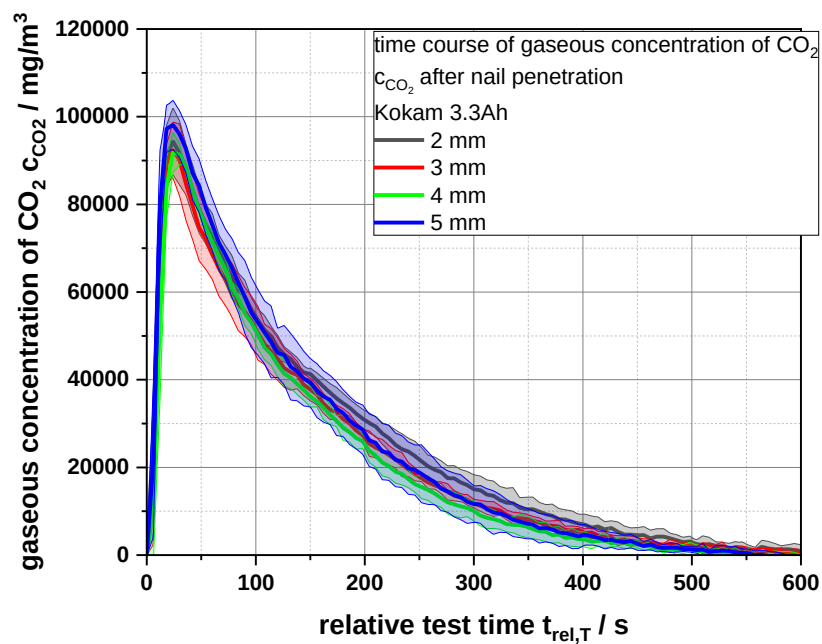


Figure S5. Average gaseous concentrations of CO_2 c_{CO_2} as a function of the relative test time $t_{\text{rel},T}$ of 3.3 Ah cell for different nail geometries from 2 to 5 mm.

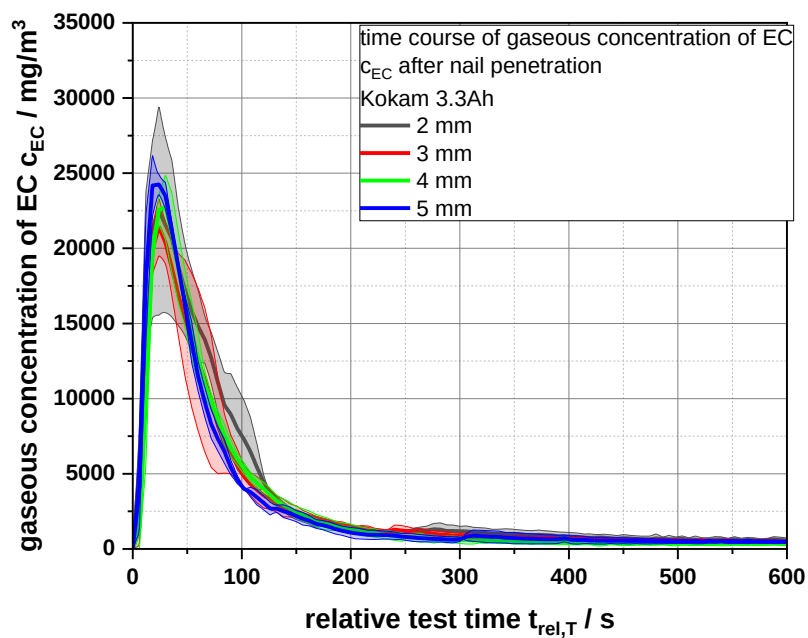


Figure S6. Average gaseous concentrations of EC c_{EC} as a function of the relative test time $t_{\text{rel},T}$ of 3.3 Ah cell for different nail geometries from 2 to 5 mm.

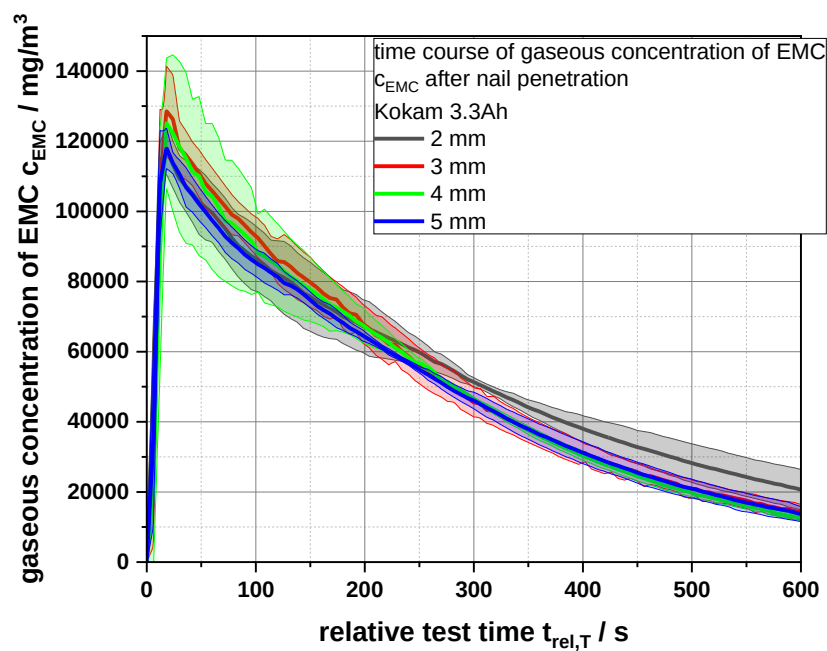


Figure S7. Average gaseous concentrations of EMC c_{EMC} as a function of the relative test time $t_{rel,T}$ of 3.3 Ah cell for different nail geometries from 2 to 5 mm.

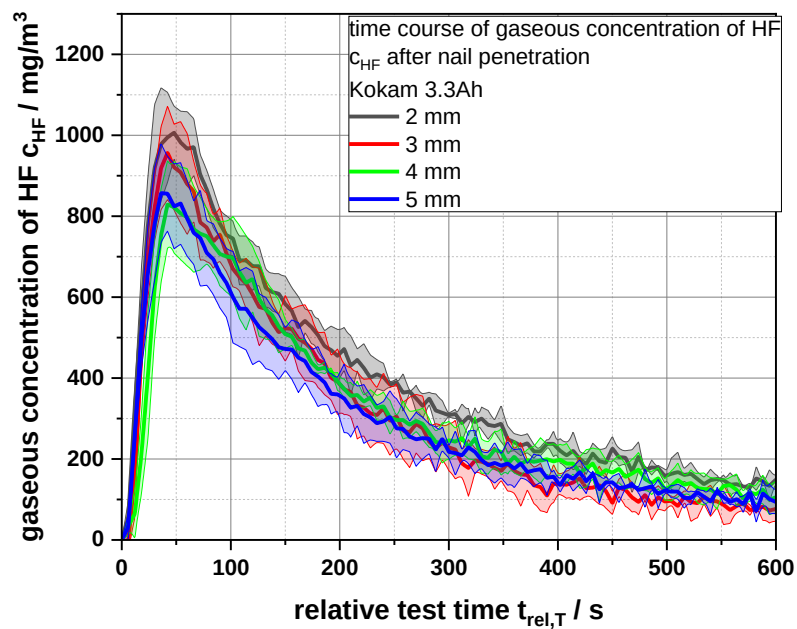


Figure S8. Average gaseous concentrations of HF c_{HF} as a function of the relative test time $t_{rel,T}$ of 3.3 Ah cell for different nail geometries from 2 to 5 mm.

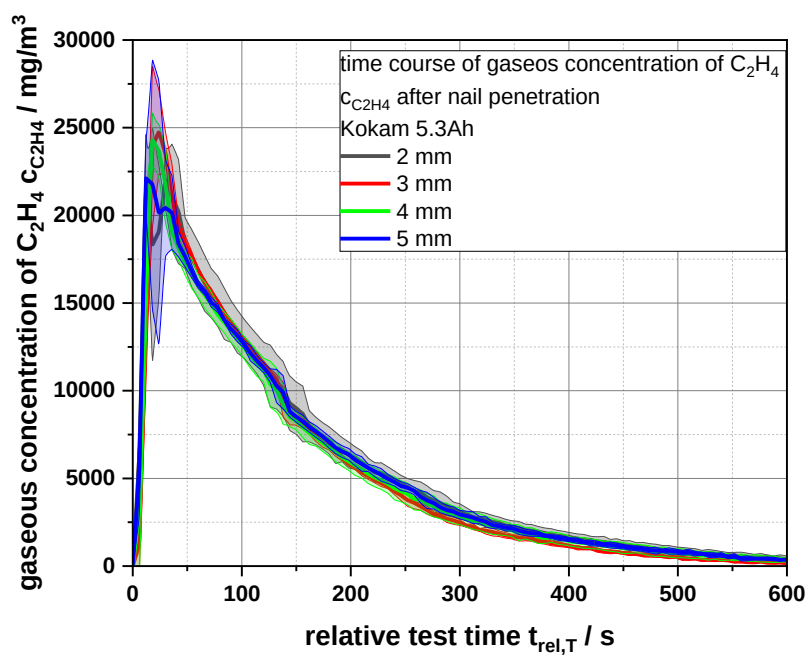


Figure S9. Average gaseous concentrations of C_2H_4 as a function of the relative test time $t_{rel,T}$ of 5.3 Ah cell for different nail geometries from 2 to 5 mm.

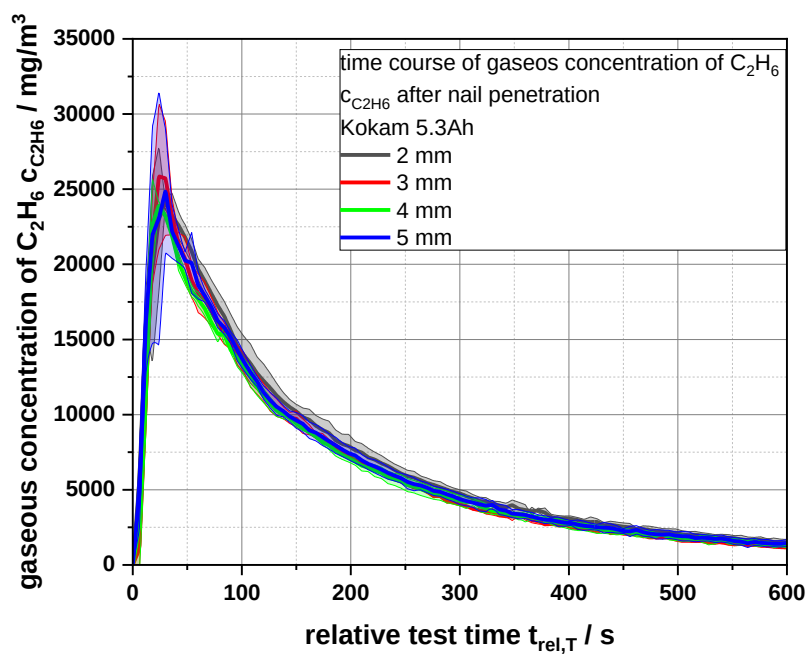


Figure S10. Average gaseous concentrations of C_2H_6 as a function of the relative test time $t_{rel,T}$ of 5.3 Ah cell for different nail geometries from 2 to 5 mm.

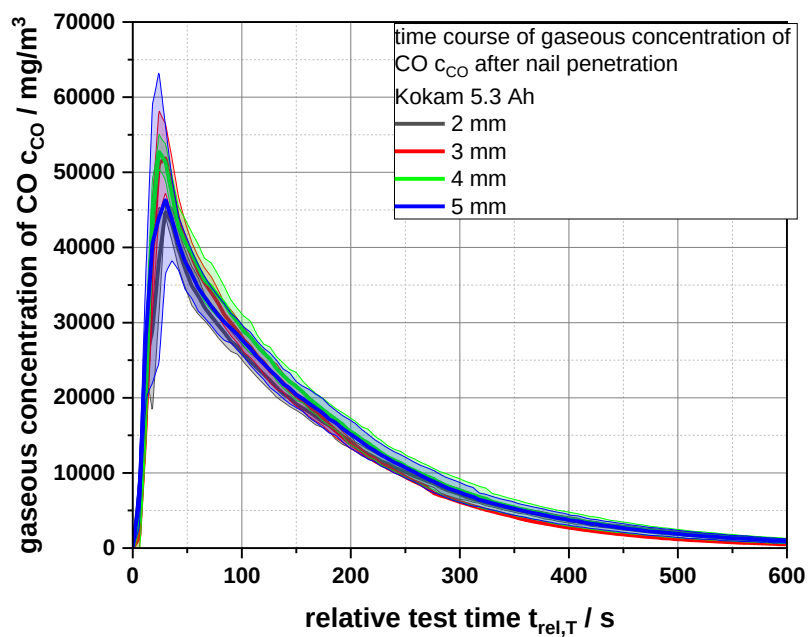


Figure S11. Average gaseous concentrations of CO c_{CO} as a function of the relative test time $t_{rel,T}$ of 5.3 Ah cell for different nail geometries from 2 to 5 mm.

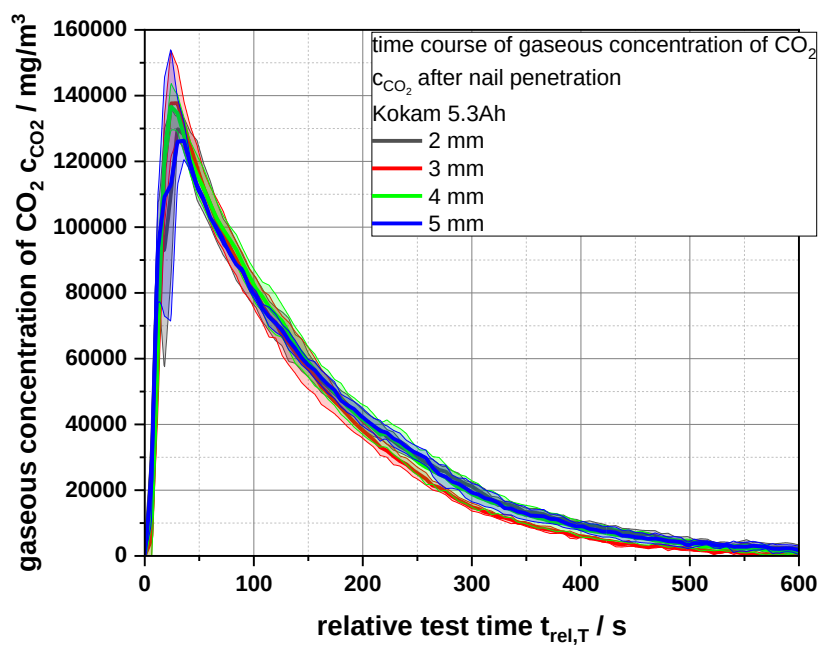


Figure S12. Average gaseous concentrations of CO₂ c_{CO_2} as a function of the relative test time $t_{rel,T}$ of 5.3 Ah cell for different nail geometries from 2 to 5 mm.

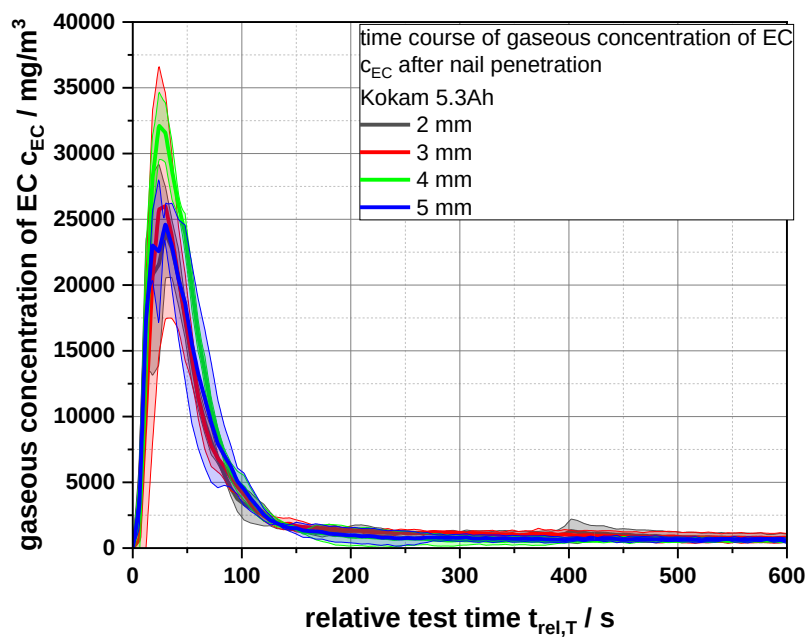


Figure S13. Average gaseous concentrations of EC c_{EC} as a function of the relative test time $t_{rel,T}$ of 5.3 Ah cell for different nail geometries from 2 to 5 mm.

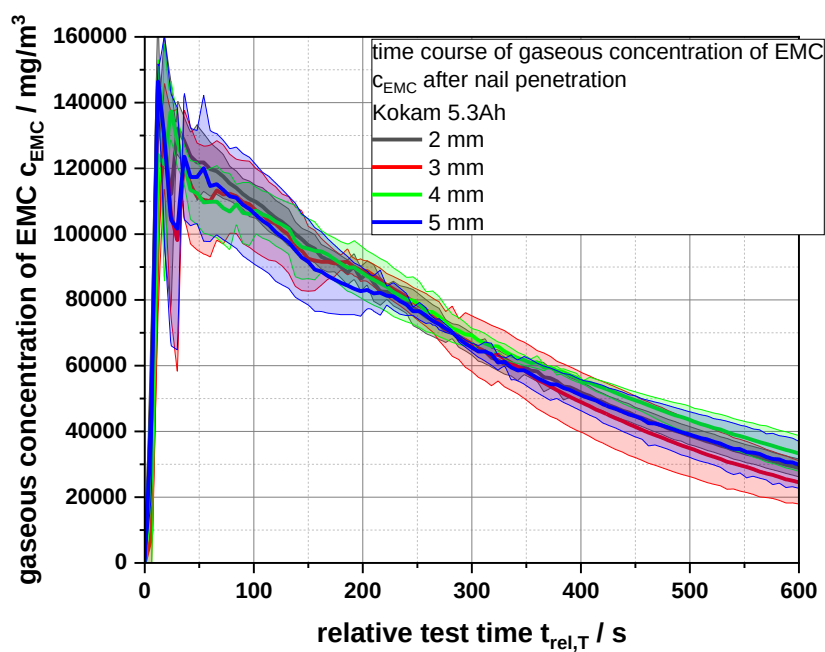


Figure S14. Average gaseous concentrations of EMC c_{EMC} as a function of the relative test time $t_{rel,T}$ of 5.3 Ah cell for different nail geometries from 2 to 5 mm.

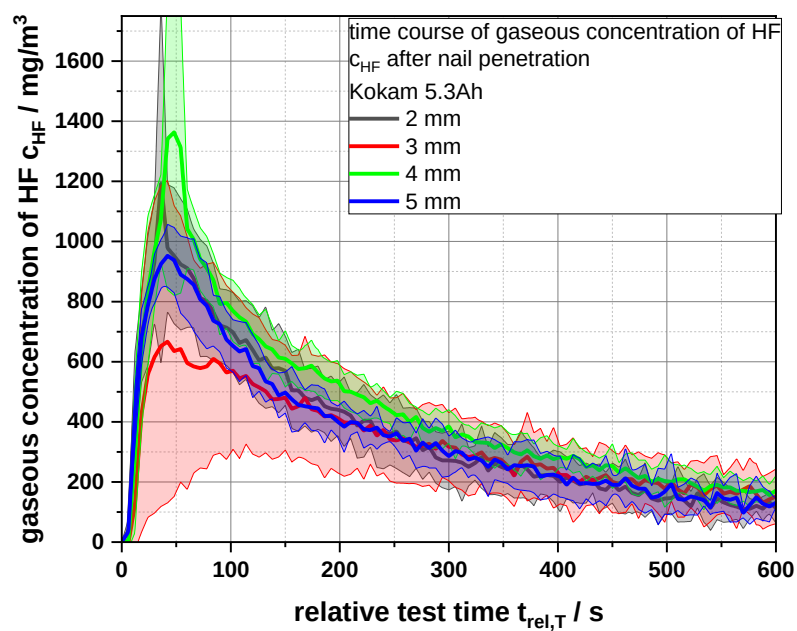


Figure S15. Average gaseous concentrations of HF c_{HF} as a function of the relative test time $t_{rel,T}$ of 5.3 Ah cell for different nail geometries from 2 to 5 mm.

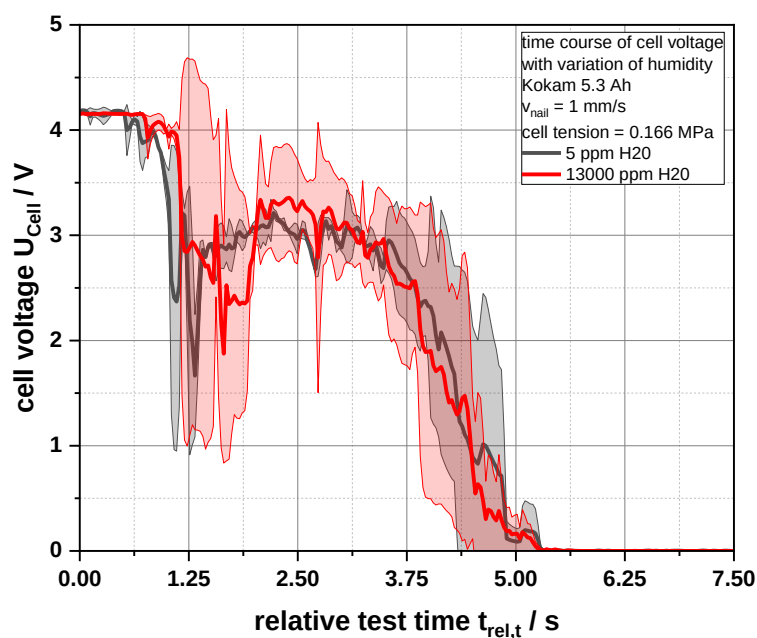


Figure S16. Average cell voltage U_{cell} as a function of the relative test time $t_{rel,T}$ of a 5.3 Ah cells for an air humidity of 5 ppm and 13,000 ppm H₂O.

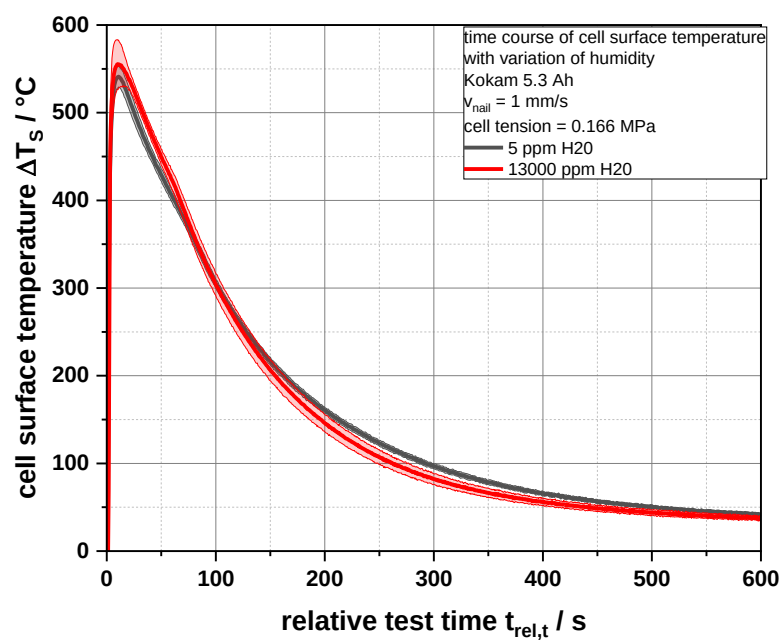


Figure S17. Average cell surface temperature ΔT_s as a function of the relative test time $t_{\text{rel},T}$ of a 5.3 Ah cells for an air humidity of 5 ppm and 13,000 ppm H₂O.

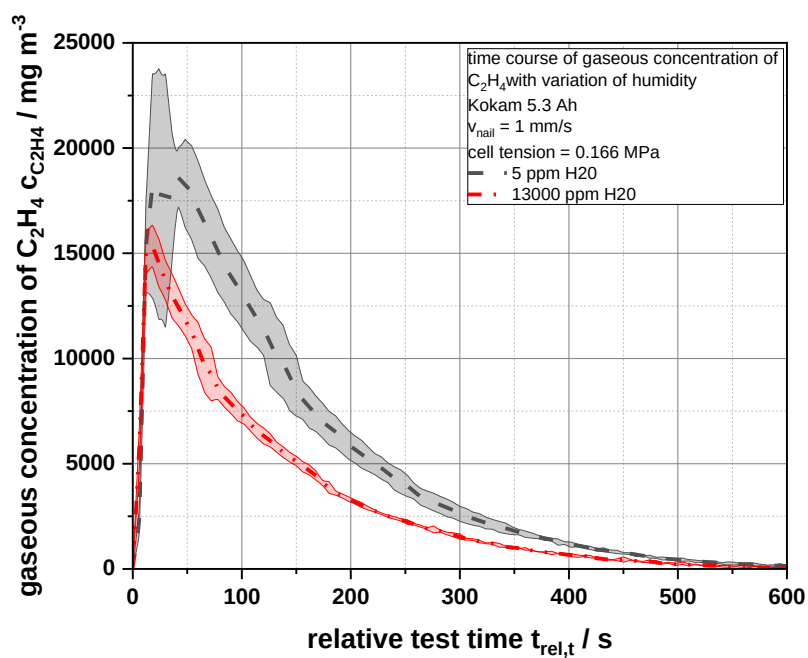


Figure S18. Average gaseous concentrations of C_2H_4 as a function of the relative test time $t_{\text{rel},T}$ of a 5.3 Ah cells for an air humidity of 5 ppm and 13,000 ppm H₂O.

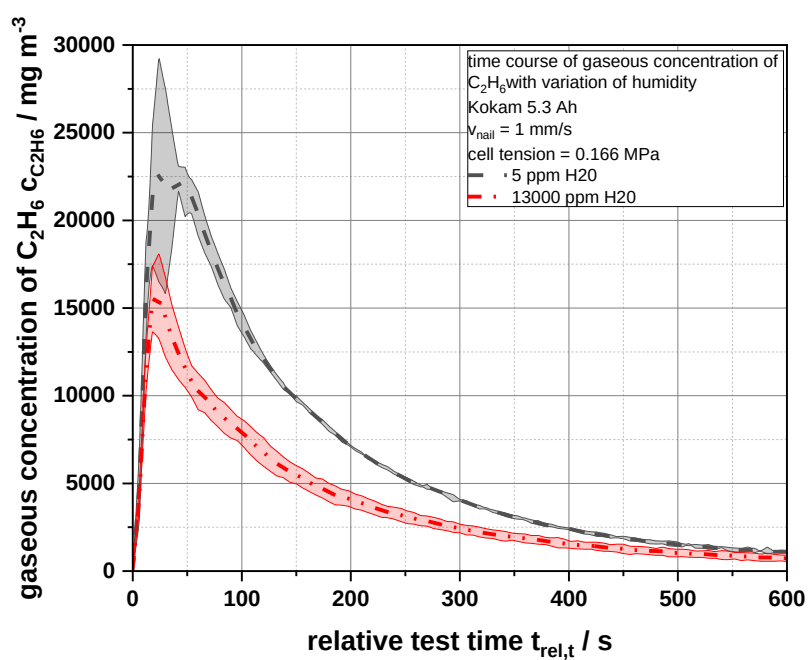


Figure S19. Average gaseous concentrations of C_2H_6 $c_{C_2H_6}$ as a function of the relative test time $t_{rel,T}$ of a 5.3 Ah cells for an air humidity of 5 ppm and 13,000 ppm H_2O .

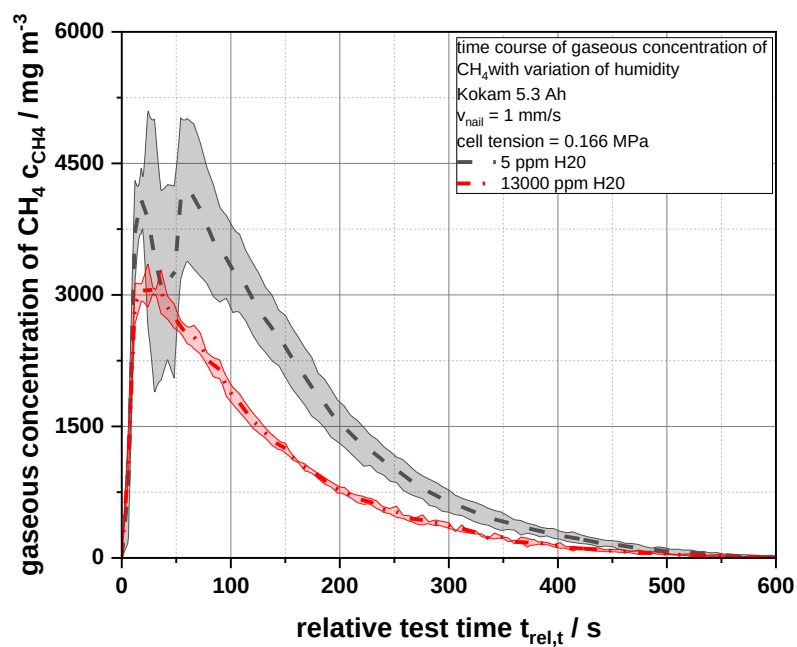


Figure S20. Average gaseous concentrations of CH_4 c_{CH_4} as a function of the relative test time $t_{rel,T}$ of a 5.3 Ah cells for an air humidity of 5 ppm and 13,000 ppm H_2O .

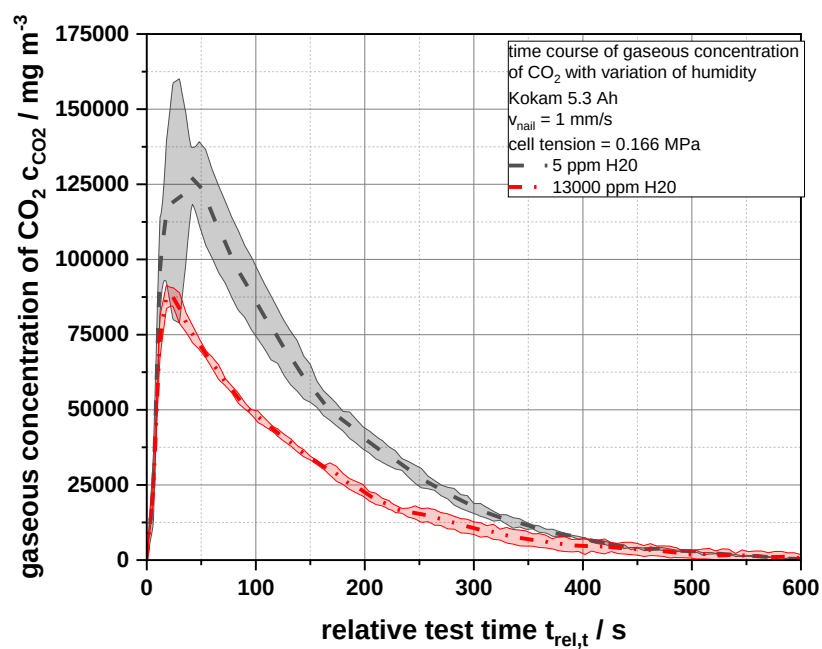


Figure S21. Average gaseous concentrations of CO_2 c_{CO_2} as a function of the relative test time $t_{\text{rel},T}$ of a 5.3 Ah cells for an air humidity of 5 ppm and 13,000 ppm H_2O .

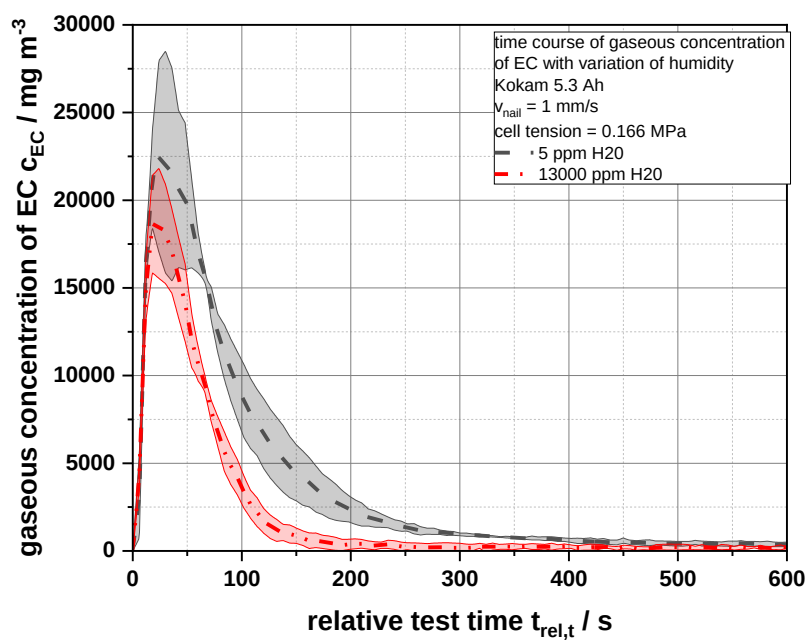


Figure S22. Average gaseous concentrations of EC c_{EC} as a function of the relative test time $t_{\text{rel},T}$ of a 5.3 Ah cells for an air humidity of 5 ppm and 13,000 ppm H_2O .

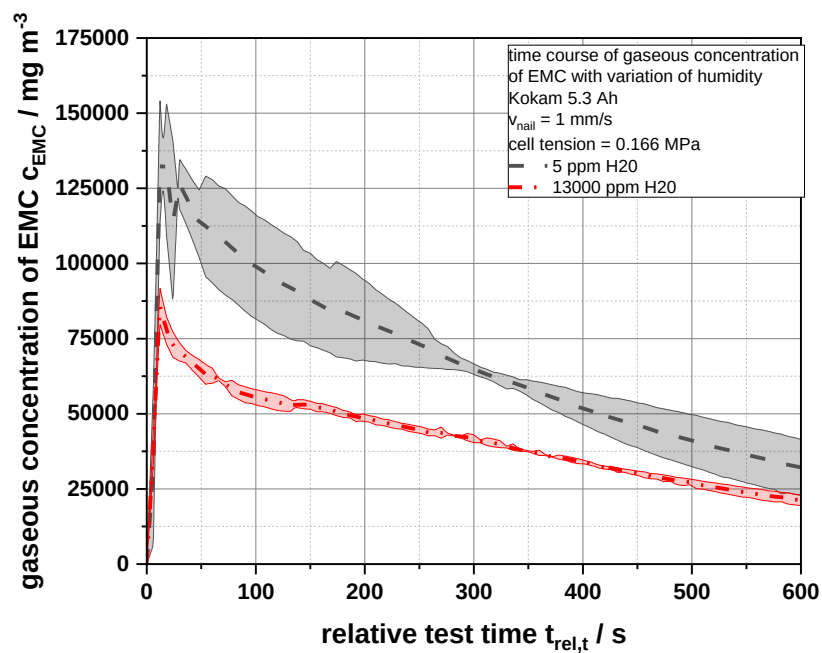


Figure S23. Average gaseous concentrations of EMC c_{EMC} as a function of the relative test time $t_{\text{rel},T}$ of a 5.3 Ah cells for an air humidity of 5 ppm and 13,000 ppm H₂O.

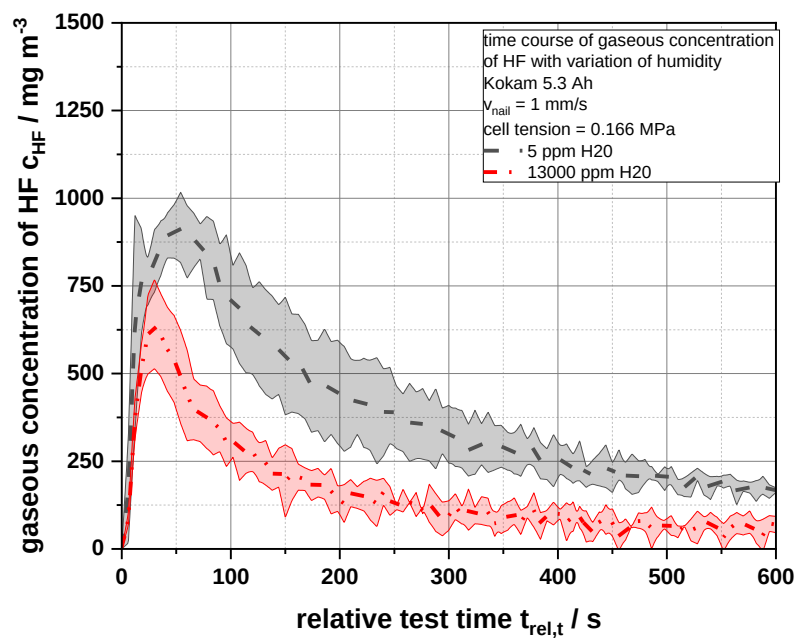


Figure S24. Average gaseous concentrations of HF c_{HF} as a function of the relative test time $t_{\text{rel},T}$ of a 5.3 Ah cells for an air humidity of 5 ppm and 13,000 ppm H₂O.