Supplementary Information

for

The influence of curing temperature on the strength and phase assemblage of hybrid cements based on GGBFS/FA blends

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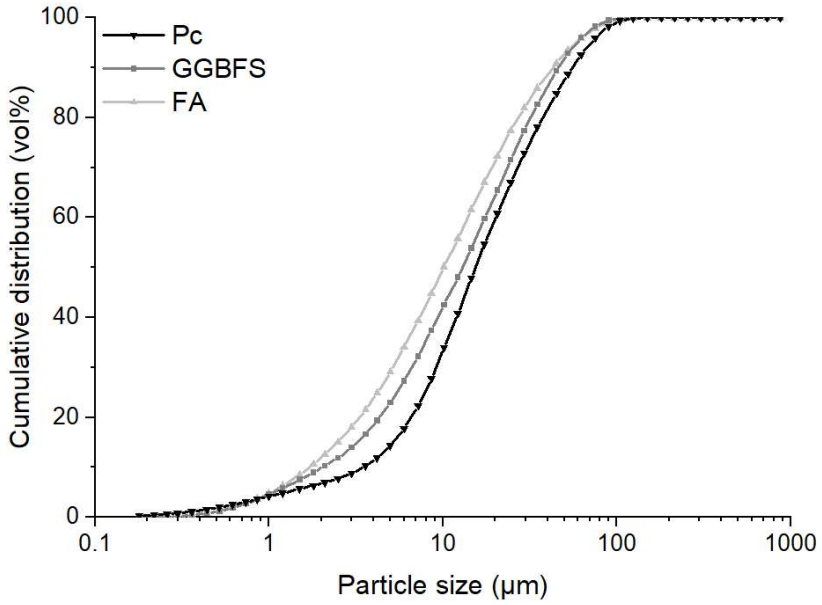
Supplementary Table S1

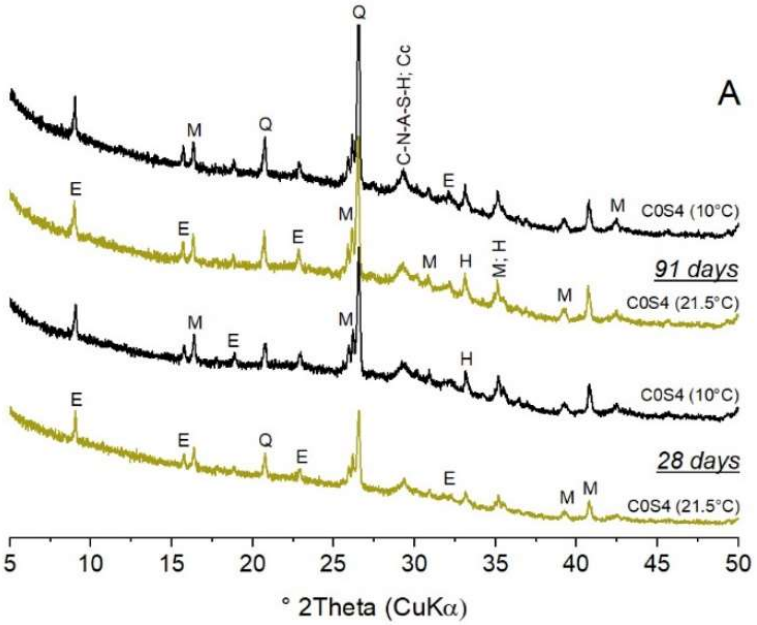
Supplementary Figures S1–S12

Supplementary Table S1. Crystal structure data files used to perform the RQPA.

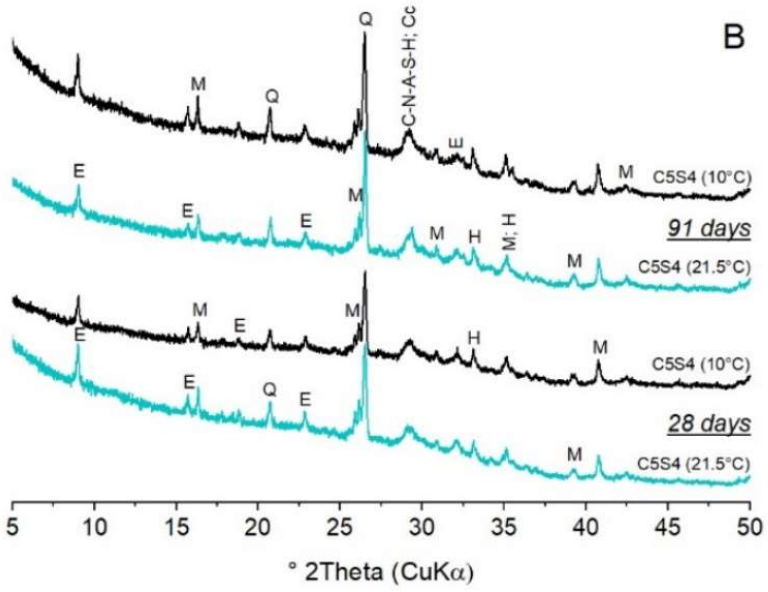
Phase	Database	Entry number
LaB_6	ICSD	#40947
Zincite	COD	#9004178
Hatrurite (alite, C_3S)	ICSD	#94742
Belite (C_2S)	ICSD	#79550
C_3A	ICSD	#1841
C_4AF	ICSD	#51265
Calcite	ICSD	#79673
Gypsum	ICSD	#151692
Quartz	ICSD	#414141
Mullite	ICSD	#23867
Hematite	ICSD	#82903
Anhydrite	ICSD	#40043



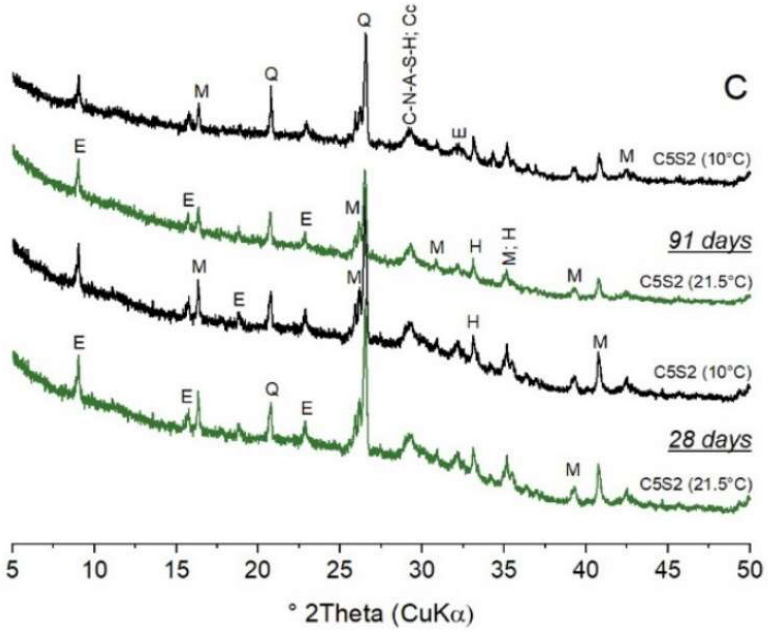
Supplementary Figure S1. Particle size distributions of the starting materials, determined by laser granulometry after dispersion in isopropanol.



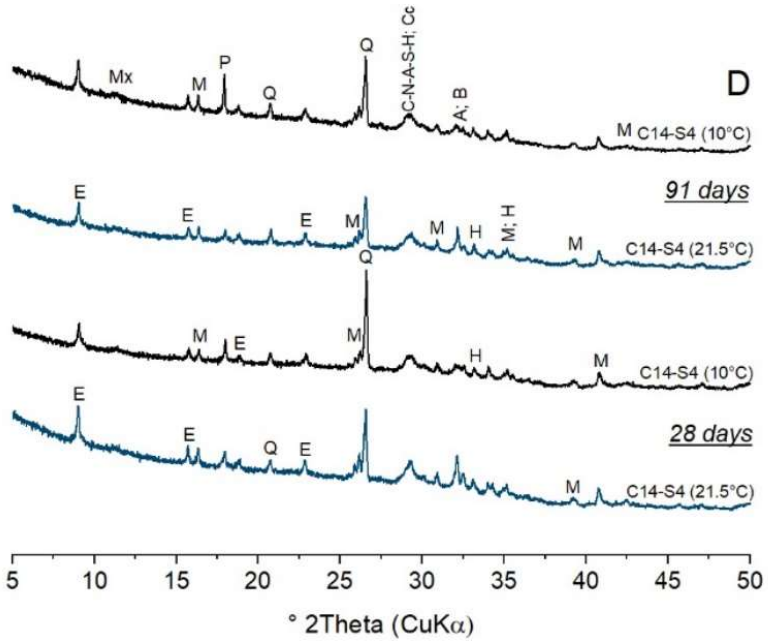
Supplementary Figure S2. XRD patterns of the hybrid cement C0S4 after 28 days and 91 days of curing at 10 °C and 21.5 °C. Major reflections are labelled: E = ettringite; M = mullite; Q = quartz; Cc = calcite; H = hematite.



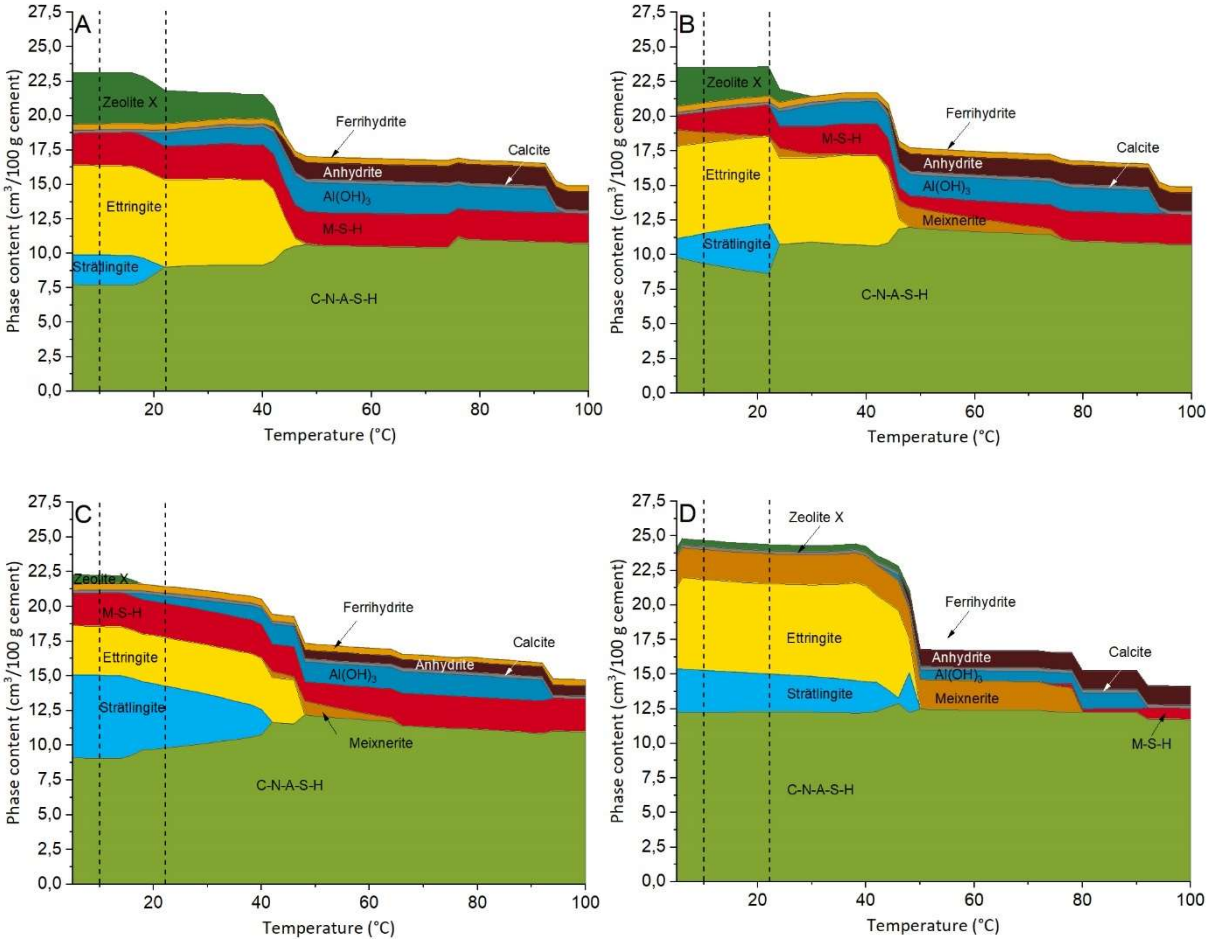
Supplementary Figure S3. XRD patterns of the hybrid cement C5S4 after 28 days and 91 days of curing at 10 °C and 21.5 °C. Major reflections are labelled: E = ettringite; M = mullite; Q = quartz; Cc = calcite; H = hematite.



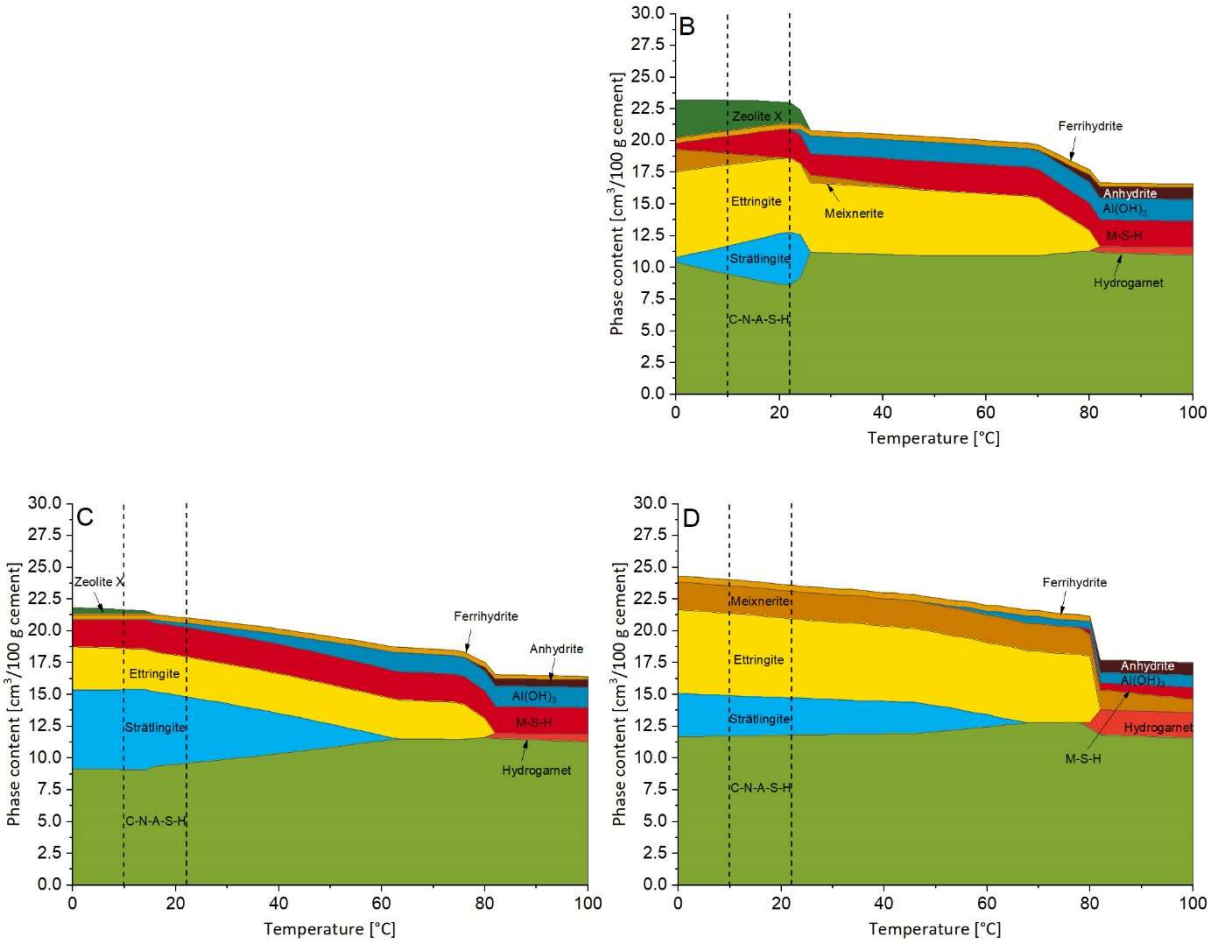
Supplementary Figure S4. XRD patterns of the hybrid cement C5S2 after 28 days and 91 days of curing at 10 °C and 21.5 °C. Major reflections are labelled: E = ettringite; M = mullite; Q = quartz; Cc = calcite; H = hematite..



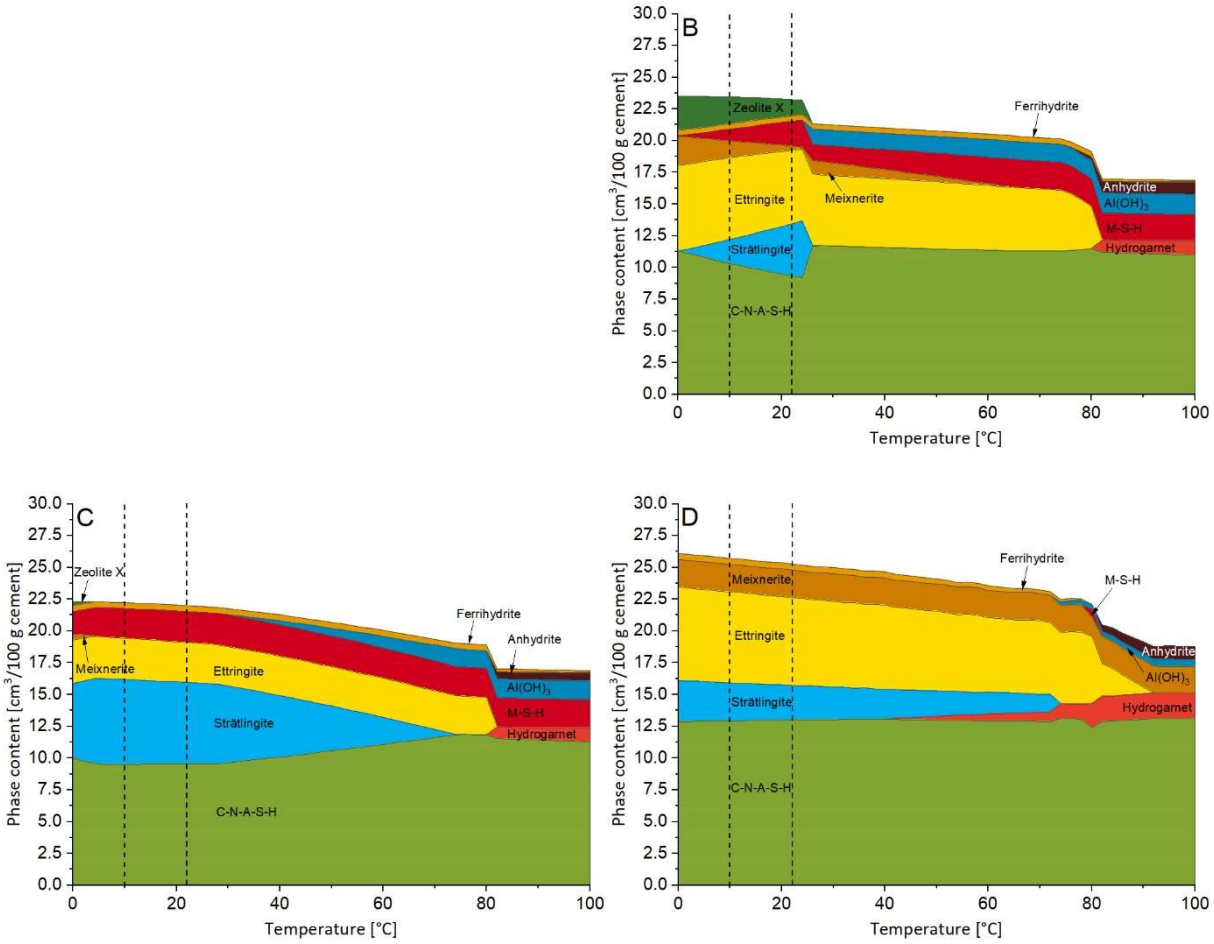
Supplementary Figure S5. XRD patterns of the hybrid cement C14S4 after 28 days and 91 days of curing at 10 °C and 21.5 °C. Major reflections are labelled: E = ettringite; Mx = meixnerite (Mg-Al LDH); M = mullite; P = portlandite; Q = quartz; Cc = calcite; A = alite; B = belite; H = hematite.



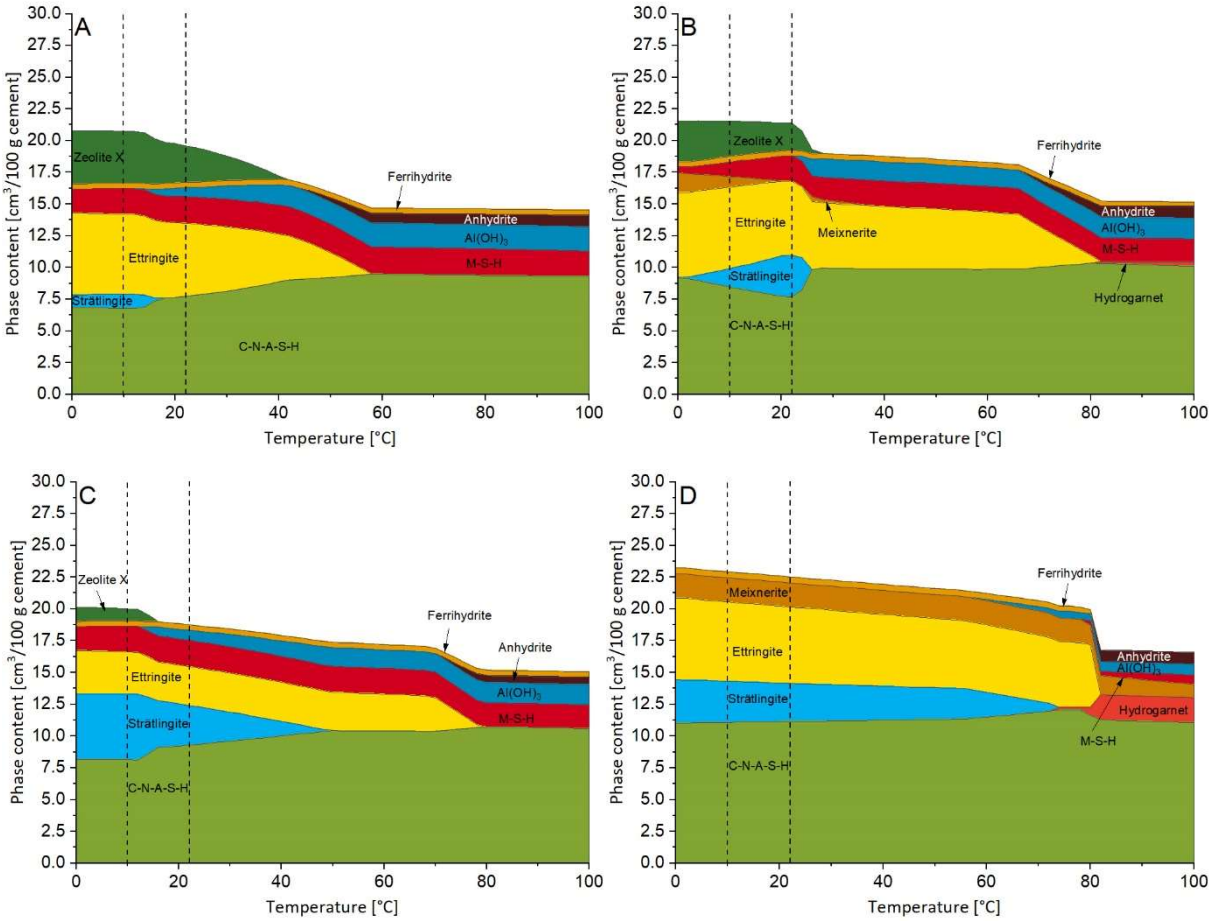
Supplementary Figure S6. Modeled reaction products of the cement pastes C0S4 (A), C5S4 (B), C5S2 (C) and C14S4 (D) as a function of the curing temperature in presence of CO_2 (0.075 g CO_2/g of cement). Dotted lines mark 10 °C and 21.5 °C.



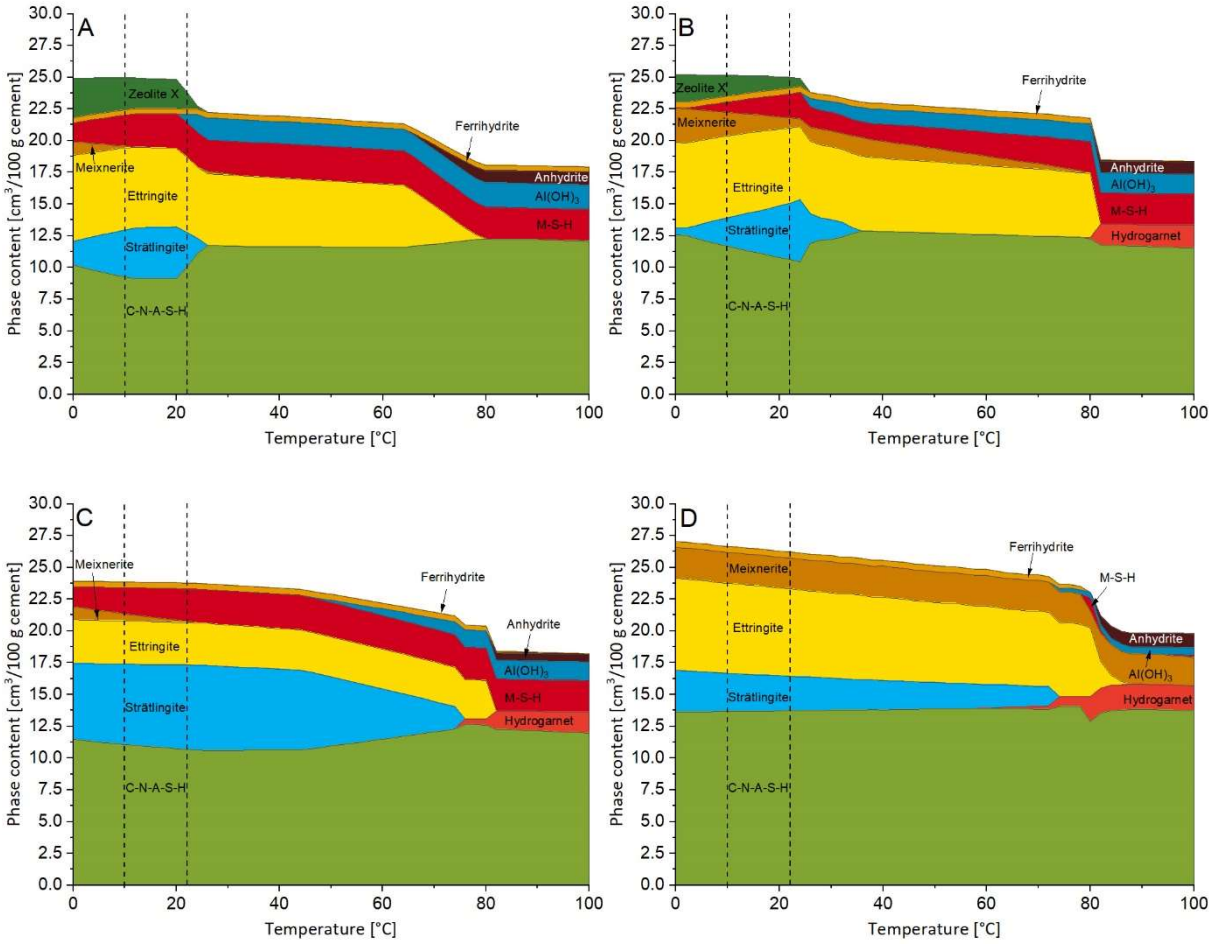
Supplementary Figure S7. Modeled reaction products of the cement pastes C5S4 (B), C5S2 (C) and C14S4 (D) as a function of temperature at a DoH of the Portland clinker (Pc) of 60 %. The DoHs of the other starting materials (GGBFS, FA) were kept as in the original modeling. Dotted lines mark 10 °C and 21.5 °C.



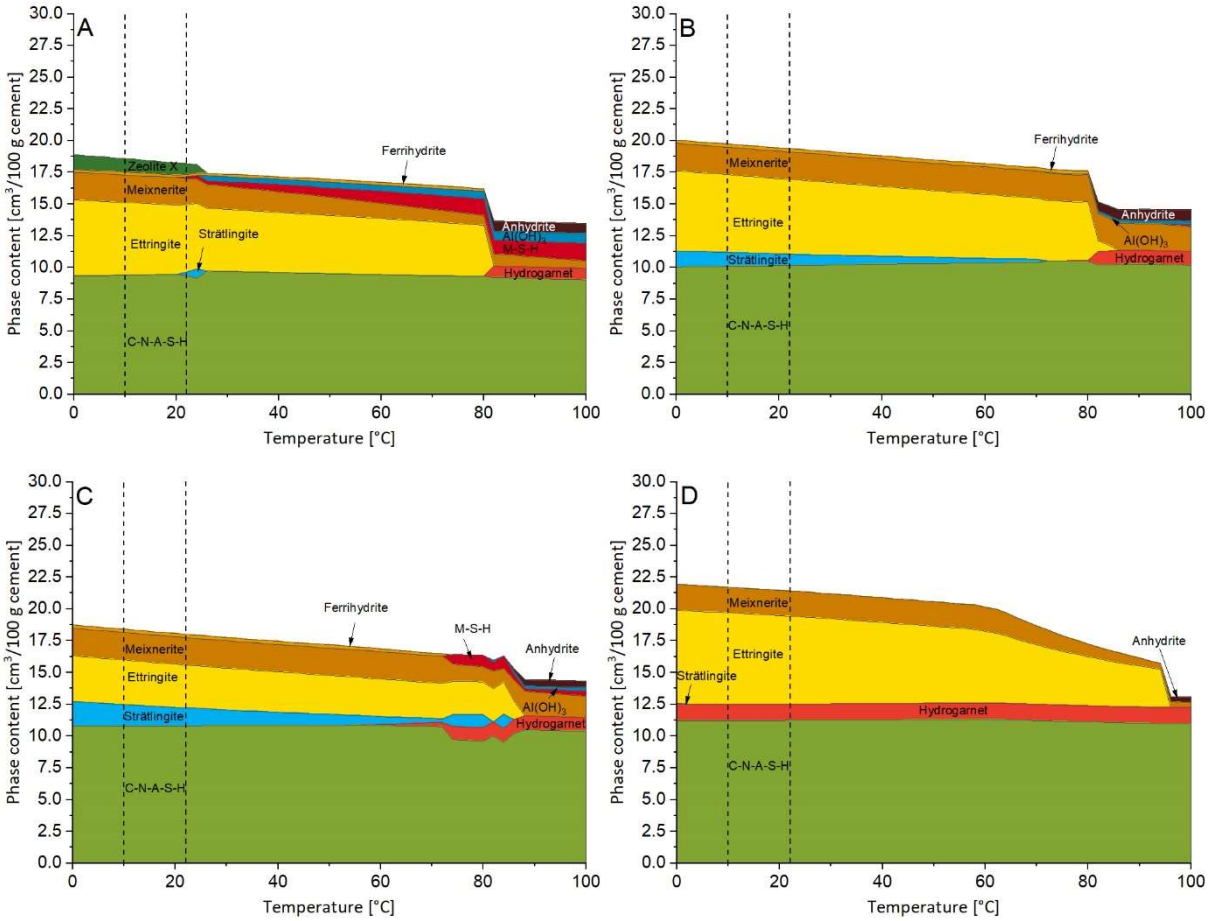
Supplementary Figure S8. Modeled reaction products of the cement pastes C5S4 (B), C5S2 (C) and C14S4 (D) as a function of temperature at a DoH of the Portland clinker (Pc) of 80 %. The DoHs of the other starting materials (GGBFS, FA) were kept as in the original modeling. Dotted lines mark 10 °C and 21.5 °C.



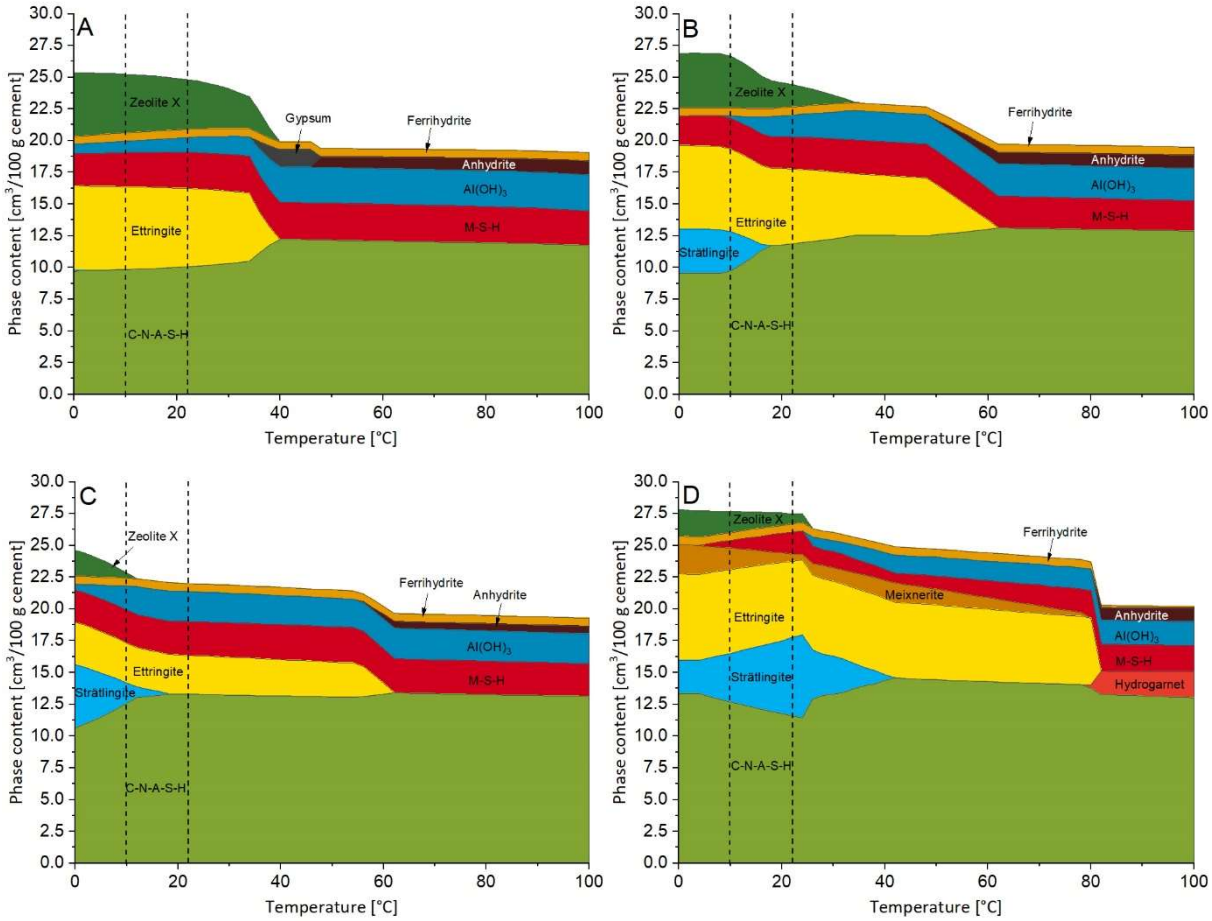
Supplementary Figure S9. Modeled reaction products of the cement pastes C0S4 (A), C5S4 (B), C5S2 (C) and C14S4 (D) as a function of temperature at a DoH of the GGBFS of 50 %. The DoHs of the other starting materials (Pc, FA) were kept as in the original modeling. Dotted lines mark 10 °C and 21.5 °C.



Supplementary Figure S10. Modeled reaction products of the cement pastes C0S4 (A), C5S4 (B), C5S2 (C) and C14S4 (D) as a function of temperature at a DoH of the GGBFS of 70 %. The DoHs of the other starting materials (Pc, FA) were kept as in the original modeling. Dotted lines mark 10 °C and 21.5 °C.



Supplementary Figure S11. Modeled reaction products of the cement pastes C0S4 (A), C5S4 (B), C5S2 (C) and C14S4 (D) as a function of temperature at a DoH of the FA of 10 %. The DoHs of the other starting materials (Pc, GGBFS) were kept as in the original modeling. Dotted lines mark 10 °C and 21.5 °C.



Supplementary Figure S12. Modeled reaction products of the cement pastes C0S4 (A), C5S4 (B), C5S2 (C) and C14S4 (D) as a function of temperature at a DoH of the FA of 30 %. The DoHs of the other starting materials (Pc, GGBFS) were kept as in the original modeling. Dotted lines mark 10 °C and 21.5 °C.