# Frank Winnefeld

List of Publications by Year
in descending order



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|---|---|---|---|
| 104 papers | 13,234 citations | 30070 54 h-index | 30087 103 g-index |
| 105 all docs | 105 docs citations | 105 times ranked | 5458 citing authors |

| # | Article | IF | Citations |
|---|---|---|---|
| 1 | Advances in alternative cementitious binders. Cement and Concrete Research, 2011, 41, 1232-1243. | 11.0 | 1,232 |
| 2 | Influence of activator type on hydration kinetics, hydrate assemblage and microstructural development of alkali activated blast-furnace slags. Cement and Concrete Research, 2011, 41, 301-310. | 11.0 | 720 |
| 3 | Thermodynamic modelling of the hydration of Portland cement. Cement and Concrete Research, 2006, 36, 209-226. | 11.0 | 665 |
| 4 | Hydration of calcium sulfoaluminate cements â€" Experimental findings and thermodynamic modelling. Cement and Concrete Research, 2010, 40, 1239-1247. | 11.0 | 602 |
| 5 | Effect of temperature on the pore solution, microstructure and hydration products of Portland cement pastes. Cement and Concrete Research, 2007, 37, 483-491. | 11.0 | 541 |
| 6 | Influence of slag chemistry on the hydration of alkali-activated blast-furnace slag â€" Part I: Effect of MgO. Cement and Concrete Research, 2011, 41, 955-963. | 11.0 | 534 |
| 7 | Effects of the molecular architecture of comb-shaped superplasticizers on their performance in cementitious systems. Cement and Concrete Composites, 2007, 29, 251-262. | 10.7 | 409 |
| 8 | Influence of slag chemistry on the hydration of alkali-activated blast-furnace slag â€" Part II: Effect of Al2O3. Cement and Concrete Research, 2012, 42, 74-83. | 11.0 | 406 |
| 9 | Hydration of Portland cement with high replacement by siliceous fly ash. Cement and Concrete Research, 2012, 42, 1389-1400. | 11.0 | 387 |
| 10 | Adsorption of polyelectrolytes and its influence on the rheology, zeta potential, and microstructure of various cement and hydrate phases. Journal of Colloid and Interface Science, 2008, 323, 301-312. | 9.4 | 314 |
| 11 | Hydration of quaternary Portland cement blends containing blast-furnace slag, siliceous fly ash and limestone powder. Cement and Concrete Composites, 2015, 55, 374-382. | 10.7 | 278 |
| 12 | Hydration of alkali-activated slag: comparison with ordinary Portland cement. Advances in Cement Research, 2006, 18, 119-128. | 1.6 | 256 |
| 13 | Interaction of polycarboxylate-based superplasticizers with cements containing different C3A amounts. Cement and Concrete Composites, 2009, 31, 153-162. | 10.7 | 255 |
| 14 | Calorimetric and thermogravimetric study on the influence of calcium sulfate on the hydration of yeâ€™elimite. Journal of Thermal Analysis and Calorimetry, 2010, 101, 949-957. | 3.6 | 250 |
| 15 | Role of calcium on chloride binding in hydrated Portland cementâ€“metakaolinâ€“limestone blends. Cement and Concrete Research, 2017, 95, 205-216. | 11.0 | 207 |
| 16 | The ternary system Portland cementâ€“calcium sulphoaluminate clinkerâ€“anhydrite: Hydration mechanism and mortar properties. Cement and Concrete Composites, 2010, 32, 497-507. | 10.7 | 204 |
| 17 | Hydration mechanisms of super sulphated slag cement. Cement and Concrete Research, 2008, 38, 983-992. | 11.0 | 198 |
| 18 | Interaction of cement model systems with superplasticizers investigated by atomic force microscopy, zeta potential, and adsorption measurements. Journal of Colloid and Interface Science, 2010, 347, 15-24. | 9.4 | 198 |

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|---|---|---|---|
| 19 | Effect of temperature on the hydration of Portland cement blended with siliceous fly ash. Cement and Concrete Research, 2013, 52, 169-181. | 11.0 | 193 |
| 20 | Stability in the system CaOâ€“Al2O3â€“H2O. Cement and Concrete Research, 2012, 42, 1621-1634. | 11.0 | 192 |
| 21 | Hydration of Portland cement with additions of calcium sulfoaluminates. Cement and Concrete Research, 2013, 43, 81-94. | 11.0 | 190 |
| 22 | The effect of viscosity modifying agents on mortar and concrete. Cement and Concrete Composites, 2007, 29, 341-349. | 10.7 | 178 |
| 23 | Assessment of phase formation in alkali activated low and high calcium fly ashes in building materials. Construction and Building Materials, 2010, 24, 1086-1093. | 7.2 | 172 |
| 24 | Beneficial use of limestone filler with calcium sulphoaluminate cement. Construction and Building Materials, 2012, 26, 619-627. | 7.2 | 165 |
| 25 | Early hydration of SCM-blended Portland cements: A pore solution and isothermal calorimetry study. Cement and Concrete Research, 2017, 93, 71-82. | 11.0 | 145 |
| 26 | Reactivity tests for supplementary cementitious materials: RILEM TC 267-TRM phase 1. Materials and Structures/Materiaux Et Constructions, 2018, 51, 1. | 3.1 | 144 |
| 27 | Influence of fly ash on the hydration of calcium sulfoaluminate cement. Cement and Concrete Research, 2017, 95, 152-163. | 11.0 | 142 |
| 28 | Influence of superabsorbent polymers on hydration of cement pastes with low water-to-binder ratio. Journal of Thermal Analysis and Calorimetry, 2014, 115, 425-432. | 3.6 | 137 |
| 29 | Reaction mechanism of magnesium potassium phosphate cement with high magnesium-to-phosphate ratio. Cement and Concrete Research, 2018, 108, 140-151. | 11.0 | 135 |
| 30 | Carbonation of calcium sulfoaluminate mortars. Cement and Concrete Composites, 2017, 80, 123-134. | 10.7 | 134 |
| 31 | Report of TC 238-SCM: hydration stoppage methods for phase assemblage studies of blended cementsâ€”results of a round robin test. Materials and Structures/Materiaux Et Constructions, 2018, 51, 1. | 3.1 | 132 |
| 32 | Contribution of limestone to the hydration of calcium sulfoaluminate cement. Cement and Concrete Composites, 2015, 62, 204-211. | 10.7 | 130 |
| 33 | Alkali-Silica Reaction: the Influence of Calcium on Silica Dissolution and the Formation of Reaction Products. Journal of the American Ceramic Society, 2011, 94, 1243-1249. | 3.8 | 129 |
| 34 | Influence of the calcium sulphate source on the hydration mechanism of Portland cementâ€“calcium sulphoaluminate clinkerâ€“calcium sulphate binders. Cement and Concrete Composites, 2011, 33, 551-561. | 10.7 | 124 |
| 35 | Hydration Degree of Alkaliâ€Activated Slags: A <sup>29</sup><scp><scp>Si</scp> NMR</scp> Study. Journal of the American Ceramic Society, 2011, 94, 4541-4547. | 3.8 | 120 |
| 36 | Influence of magnesium-to-phosphate ratio and water-to-cement ratio on hydration and properties of magnesium potassium phosphate cements. Cement and Concrete Research, 2019, 123, 105781. | 11.0 | 120 |

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|---|---|---|---|
| 37 | The microstructure of dispersed and non-dispersed fresh cement pastes â€" New insight by cryo-microscopy. Cement and Concrete Research, 2008, 38, 522-529. | 11.0 | 117 |
| 38 | RILEM TC-238 SCM recommendation on hydration stoppage by solvent exchange for the study of hydrate assemblages. Materials and Structures/Materiaux Et Constructions, 2018, 51, 1. | 3.1 | 117 |
| 39 | Using gypsum to control hydration kinetics of CSA cements. Construction and Building Materials, 2017, 155, 154-163. | 7.2 | 116 |
| 40 | Effect of relative humidity on the carbonation rate of portlandite, calcium silicate hydrates and ettringite. Cement and Concrete Research, 2020, 135, 106116. | 11.0 | 116 |
| 41 | Effect of aging on silica aerogel properties. Microporous and Mesoporous Materials, 2017, 241, 293-302. | 4.4 | 111 |
| 42 | Solid solution between Al-ettringite and Fe-ettringite (Ca6[Al1â^'xFex(OH)6]2(SO4)3Â·26H2O). Cement and Concrete Research, 2009, 39, 482-489. | 11.0 | 107 |
| 43 | Multi-method approach to study influence of superplasticizers on cement suspensions. Cement and Concrete Research, 2011, 41, 1058-1066. | 11.0 | 103 |
| 44 | Outcomes of the RILEM round robin on degree of reaction of slag and fly ash in blended cements. Materials and Structures/Materiaux Et Constructions, 2017, 50, 1. | 3.1 | 101 |
| 45 | Chemical activation of hybrid binders based on siliceous fly ash and Portland cement. Cement and Concrete Composites, 2016, 66, 10-23. | 10.7 | 99 |
| 46 | Advances in understanding ye'elimite-rich cements. Cement and Concrete Research, 2019, 123, 105778. | 11.0 | 91 |
| 47 | Quantification of hydration phases in supersulfated cements: review and new approaches. Advances in Cement Research, 2011, 23, 265-275. | 1.6 | 84 |
| 48 | Phase equilibria in the system Ca4Al6O12SO4 â€" Ca2SiO4 â€" CaSO4 â€" H2O referring to the hydration of calcium sulfoaluminate cements. RILEM Technical Letters, 0, 1, 10-16. | 0.0 | 74 |
| 49 | Effect of the addition of ultrafine cement and short fiber reinforcement on shrinkage, rheological and mechanical properties of Portland cement pastes. Cement and Concrete Composites, 2004, 26, 541-549. | 10.7 | 67 |
| 50 | The effect of glass composition on the reactivity of synthetic glasses. Journal of the American Ceramic Society, 2017, 100, 2553-2567. | 3.8 | 67 |
| 51 | Thermodynamic data for magnesium (potassium) phosphates. Applied Geochemistry, 2019, 111, 104450. | 3.0 | 66 |
| 52 | Simultaneous measurements of heat of hydration and chemical shrinkage on hardening cement pastes. Journal of Thermal Analysis and Calorimetry, 2010, 101, 925-932. | 3.6 | 65 |
| 53 | Impact of rapid-hardening cements on mechanical properties of cement bitumen emulsion asphalt. Materials and Structures/Materiaux Et Constructions, 2016, 49, 487-498. | 3.1 | 65 |
| 54 | Correlating cement characteristics with rheology of paste. Cement and Concrete Research, 2007, 37, 1502-1511. | 11.0 | 64 |

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|---|---|---|---|
| 55 | Quantification of fly ash in hydrated, blended Portland cement pastes by backscattered electron imaging. Journal of Microscopy, 2013, 251, 188-204. | 1.8 | 57 |
| 56 | Further studies of the hydration of MgO-hydromagnesite blends. Cement and Concrete Research, 2019, 126, 105912. | 11.0 | 54 |
| 57 | Influence of slag composition on the hydration of alkali-activated slags. Journal of Sustainable Cement-Based Materials, 2015, 4, 85-100. | 3.1 | 53 |
| 58 | Influence of wollastonite on hydration and properties of magnesium potassium phosphate cements. Cement and Concrete Research, 2020, 131, 106012. | 11.0 | 53 |
| 59 | ASR prevention â€" Effect of aluminum and lithium ions on the reaction products. Cement and Concrete Research, 2015, 76, 192-201. | 11.0 | 50 |
| 60 | Stability of ettringite in CSA cement at elevated temperatures. Advances in Cement Research, 2016, 28, 251-261. | 1.6 | 46 |
| 61 | Further insights into calcium sulfoaluminate cement expansion. Advances in Cement Research, 2019, 31, 160-177. | 1.6 | 46 |
| 62 | Thermal behaviour of autoclaved aerated concrete exposed to fire. Cement and Concrete Composites, 2015, 62, 52-58. | 10.7 | 45 |
| 63 | Lime as an Anti-Plasticizer for Self-Compacting Clay Concrete. Materials, 2016, 9, 330. | 2.9 | 44 |
| 64 | Tricalcium Silicate Hydration Reaction in the Presence of Comb-Shaped Superplasticizers: Boundary Nucleation and Growth Model Applied to Polymer-Modified Pastes. Journal of Physical Chemistry C, 2012, 116, 10887-10895. | 3.1 | 43 |
| 65 | Merging High Doxorubicin Loading with Pronounced Magnetic Response and Bioâ€repellent Properties in Hybrid Drug Nanocarriers. Small, 2012, 8, 2381-2393. | 10.0 | 39 |
| 66 | Influence of shrinkage and water transport mechanisms on microstructure and crack formation of tile adhesive mortars. Cement and Concrete Research, 2012, 42, 39-50. | 11.0 | 36 |
| 67 | Calcium Sulfoaluminate Sodalite (<scp><scp>Ca<sub>4</sub>Al<sub>6</sub>O<sub>12</sub>SO<sub>4</sub></scp></scp>) Crystal Structure Evaluation and Bulk Modulus Determination. Journal of the American Ceramic Society, 2014, 97, 892-898. | 3.8 | 36 |
| 68 | Synthesis and hydration of alite-calcium sulfoaluminate cement. Advances in Cement Research, 2017, 29, 101-111. | 1.6 | 36 |
| 69 | Silica Aerogelâ€"Epoxy Nanocomposites: Understanding Epoxy Reinforcement in Terms of Aerogel Surface Chemistry and Epoxyâ€"Silica Interface Compatibility. ACS Applied Nano Materials, 2018, 1, 4179-4189. | 5.0 | 35 |
| 70 | Characterization of Polycarboxylateâ€Ether Based Superplasticizer on Cement Clinker Surfaces. Journal of the American Ceramic Society, 2012, 95, 2189-2195. | 3.8 | 34 |
| 71 | Hydration of blended cement with high volume iron-rich slag from non-ferrous metallurgy. Cement and Concrete Research, 2022, 151, 106624. | 11.0 | 33 |
| 72 | Impact of particle size on interaction forces between ettringite and dispersing comb-polymers in various electrolyte solutions. Journal of Colloid and Interface Science, 2014, 419, 17-24. | 9.4 | 32 |

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|---|---|---|---|
| 73 | Report of RILEM TC 267-TRM phase 3: validation of the R3 reactivity test across a wide range of materials. Materials and Structures/Materiaux Et Constructions, 2022, 55, . | 3.1 | 32 |
| 74 | A fresh look at dense clay paste: Deflocculation and thixotropy mechanisms. Colloids and Surfaces A: Physicochemical and Engineering Aspects, 2018, 539, 252-260. | 4.7 | 31 |
| 75 | Hydration kinetics of tricalcium silicate by calorimetric methods. Journal of Colloid and Interface Science, 2011, 364, 118-124. | 9.4 | 30 |
| 76 | RILEM TC 247-DTA round robin test: sulfate resistance, alkali-silica reaction and freezeâ€“thaw resistance of alkali-activated concretes. Materials and Structures/Materiaux Et Constructions, 2020, 53, 1. | 3.1 | 30 |
| 77 | Moisture induced length changes of tile adhesive mortars and their impact on adhesion strength. Construction and Building Materials, 2012, 30, 426-438. | 7.2 | 27 |
| 78 | Precipitation of anionic emulsifier with ordinary Portland cement. Journal of Colloid and Interface Science, 2016, 479, 98-105. | 9.4 | 27 |
| 79 | Synthesis and characterisation of calcium sulfoaluminate cements produced by different chemical gypsums. Advances in Cement Research, 2019, 31, 113-123. | 1.6 | 26 |
| 80 | Effect of temperature curing on properties and hydration of wollastonite blended magnesium potassium phosphate cements. Cement and Concrete Research, 2021, 142, 106370. | 11.0 | 26 |
| 81 | Hydration of calcium aluminate cement blended with anhydrite. Advances in Cement Research, 2018, 30, 24-36. | 1.6 | 24 |
| 82 | Carbonation resistance of mortar produced with alternative cements. Materials and Structures/Materiaux Et Constructions, 2018, 51, 1. | 3.1 | 24 |
| 83 | Influence of Cement on Rheology and Stability of Rosin Emulsified Anionic Bitumen Emulsion. Journal of Materials in Civil Engineering, 2016, 28, . | 2.9 | 23 |
| 84 | Influence of aluminum sulfate on properties and hydration of magnesium potassium phosphate cements. Cement and Concrete Research, 2022, 156, 106788. | 11.0 | 22 |
| 85 | Reaction of clinker surfaces investigated with atomic force microscopy. Construction and Building Materials, 2012, 35, 92-96. | 7.2 | 16 |
| 86 | The influence of calcium sulfate content on the hydration of belite-calcium sulfoaluminate cements with different clinker phase compositions. Materials and Structures/Materiaux Et Constructions, 2021, 54, 1. | 3.1 | 16 |
| 87 | Hygrical shrinkage stresses in tiling systems: Numerical modeling combined with field studies. Cement and Concrete Composites, 2015, 55, 1-10. | 10.7 | 15 |
| 88 | Influence of shotcrete accelerators on the hydration of cement pastes and their impact on sulfate resistance. Construction and Building Materials, 2021, 266, 120782. | 7.2 | 15 |
| 89 | How clayey fines in aggregates influence the properties of lime mortars. Materials and Structures/Materiaux Et Constructions, 2007, 39, 433-443. | 3.1 | 13 |
| 90 | Mechanisms for efficient clay dispersing effect with tannins and sodium hydroxide. Colloids and Surfaces A: Physicochemical and Engineering Aspects, 2021, 630, 127589. | 4.7 | 13 |

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| 91 | Durability and Testing â€“ Degradation via Mass Transport. RILEM State-of-the-Art Reports, 2014, , 223-276. | 0.7 | 12 |
| 92 | Evaluation of the consistency of fiber reinforced cementitious composites. Materials and Structures/Materiaux Et Constructions, 2007, 39, 645-654. | 3.1 | 10 |
| 93 | Polymer dispersions and their interaction with mortar constituents and ceramic tile surfaces studied by zeta-potential measurements and atomic force microscopy. Cement and Concrete Composites, 2012, 34, 604-611. | 10.7 | 9 |
| 94 | Seasonal heat storage in calcium sulfoaluminate based hardened cement pastes â€“ experiences with different prototypes. Journal of Energy Storage, 2019, 25, 100850. | 8.1 | 8 |
| 95 | Carbonated wollastonite â€“ An effective supplementary cementitious material?. Journal of Microscopy, 2022, 286, 120-125. | 1.8 | 8 |
| 96 | Sulfate resistance and phase composition of shotcrete. Tunnelling and Underground Space Technology, 2021, 109, 103760. | 6.2 | 7 |
| 97 | Thermodynamic model for ternary OPC/CAC/Calcium Sulfate binders. Construction and Building Materials, 2021, 302, 124120. | 7.2 | 6 |
| 98 | Durability and Testing â€“ Chemical Matrix Degradation Processes. RILEM State-of-the-Art Reports, 2014, , 177-221. | 0.7 | 6 |
| 99 | In situ nanomanipulators as a tool to separate individual tobermorite crystals for AFM studies. Ultramicroscopy, 2007, 107, 1068-1077. | 1.9 | 5 |
| 100 | 4. Thermodynamic modelling of cement hydration: Portland cements â€“ blended cements â€“ calcium sulfoaluminate cements. , 2017, , 103-144. | | 3 |
| 101 | Outcomes of the round robin tests of RILEM TC 247-DTA on the durability of alkali-activated concrete. MATEC Web of Conferences, 2018, 199, 02024. | 0.2 | 3 |
| 102 | AAM Concretes: Standards for Mix Design/Formulation and Early-Age Properties. RILEM State-of-the-Art Reports, 2014, , 157-176. | 0.7 | 3 |
| 103 | Sulfate resistance testing of shotcrete â€“ Sample preparation in the field and under laboratory conditions. Construction and Building Materials, 2021, 276, 122233. | 7.2 | 2 |
| 104 | Reactivity of Calcined Clay in Alite-Calcium Sulfoaluminate Cement Hydration. RILEM Bookseries, 2015, , 373-379. | 0.4 | 1 |