Franz-Josef Ulm

List of Publications by Year in Descending Order

171 papers	12,654 citations	61 h-index	110 g-index
175 ext. papers	14,210 ext. citations	5.2 avg, IF	6.74 L-index

#	Paper	IF	Citations
171	Creep in reactive colloidal gels: A nanomechanical study of cement hydrates. *Physical Review Research*, **2021**, 3,	3.9	3
170	Spatial and temporal memory effects in the Nagel-Schreckenberg model for crowdsourced traffic property determination. *Physical Review E*, **2021**, 104, 044102	2.4	
169	Time-Space-Resolved Chemical Deconvolution of Cementitious Colloidal Systems Using Raman Spectroscopy. *Langmuir*, **2021**, 37, 7019-7031	4	6
168	Mode Coarsening or Fracture: Energy Transfer Mechanisms in Dynamic Buckling of Rods. *Physical Review Letters*, **2021**, 126, 045501	7.4	3
167	Phase diagram of brittle fracture in the semi-grand-canonical ensemble. *Physical Review E*, **2021**, 103, 013003	2.4	1
166	Smartphone-enabled road condition monitoring: from accelerations to road roughness and excess energy dissipation. *Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences*, **2021**, 477, 20200701	2.4	2
165	The physics of cement cohesion. *Science Advances*, **2021**, 7,	14.3	3
164	Electric energy dissipation and electric tortuosity in electron conductive cement-based materials. *Physical Review Materials*, **2020**, 4,	3.2	3
163	Effect of Confinement on Capillary Phase Transition in Granular Aggregates. *Physical Review Letters* , **2020**, 125, 255501	7.4	4
162	A simple way to use X-ray micro-tomography to infer elastic properties of heterogeneous materials: application to sedimentary rocks. *Journal of Materials Science*, **2020**, 55, 3347-3353	4.3	2
161	Nacre toughening due to cooperative plastic deformation of stacks of co-oriented aragonite platelets. *Communications Materials*, **2020**, 1,	6	10
160	Multiscale poromechanics of wet cement paste. *Proceedings of the National Academy of Sciences of the United States of America*, **2019**, 116, 10652-10657	11.5	21
159	Methane Diffusion in a Flexible Kerogen Matrix. *Journal of Physical Chemistry B*, **2019**, 123, 5635-5640	3.4	15
158	Role of Organic Matter on Nanoscale and Microscale Creep Properties of Source Rocks. *Journal of Engineering Mechanics - ASCE*, **2019**, 145, 04018121	2.4	22
157	Role of City Texture in Urban Heat Islands at Nighttime. *Physical Review Letters*, **2018**, 120, 108701	7.4	46
156	Improving the practicality and safety of artificial corneas: Pre-assembly and gamma-rays sterilization of the Boston Keratoprosthesis. *Ocular Surface*, **2018**, 16, 322-330	6.5	20
155	Impact of Nanoporosity on Hydrocarbon Transport in Shales' Organic Matter. *Nano Letters*, **2018**, 18, 832-837	11.5	41

154	Le Châtelierâs conjecture: Measurement of colloidal eigenstresses in chemically reactive materials. *Journal of the Mechanics and Physics of Solids*, **2018**, 112, 334-344	5	20
153	Thermalizing and Damping in Structural Dynamics. *Journal of Applied Mechanics, Transactions ASME*, **2018**, 85,	2.7	4
152	A reaction model for cement solidification: Evolving the CâSâH packing density at the micrometer-scale. *Journal of the Mechanics and Physics of Solids*, **2018**, 118, 58-73	5	13
151	A methodology to calibrate and to validate effective solid potentials of heterogeneous porous media from computed tomography scans and laboratory-measured nanoindentation data. *Acta Geotechnica*, **2018**, 13, 1369-1394	4.9	6
150	Atomistic and mesoscale simulation of sodium and potassium adsorption in cement paste. *Journal of Chemical Physics*, **2018**, 149, 074705	3.9	12
149	Griffithâs postulate: Grand Canonical Monte Carlo approach for fracture mechanics of solids. *Engineering Fracture Mechanics*, **2018**, 199, 544-554	4.2	2
148	Phase separation of stable colloidal clusters. *Physical Review Materials*, **2018**, 2,	3.2	2
147	Mesoscale structure, mechanics, and transport properties of source rocks' organic pore networks. *Proceedings of the National Academy of Sciences of the United States of America*, **2018**, 115, 12365-12370	11.5	27
146	Potential-of-Mean-Force Approach for Molecular DynamicsâBased Resilience Assessment of Structures. *Journal of Engineering Mechanics - ASCE*, **2018**, 144, 04018066	2.4	4
145	Inhomogeneity in Cement Hydrates: Linking Local Packing to Local Pressure. *Journal of Nanomechanics & Micromechanics*, **2017**, 7, 04017003		19
144	A potential-of-mean-force approach for fracture mechanics of heterogeneous materials using the lattice element method. *Journal of the Mechanics and Physics of Solids*, **2017**, 105, 116-130	5	11
143	Crystal-chemistry control of the mechanical properties of 2:1 clay minerals. *Applied Clay Science*, **2017**, 143, 387-398	5.2	26
142	Rate-independent fracture toughness of gray and black kerogen-rich shales. *Acta Geotechnica*, **2017**, 12, 1207-1227	4.9	18
141	Disorder-induced stiffness degradation of highly disordered porous materials. *Journal of the Mechanics and Physics of Solids*, **2017**, 106, 207-228	5	28
140	Nano-granular texture of cement hydrates. *EPJ Web of Conferences*, **2017**, 140, 15027	0.3	0
139	Stress Transmission and Failure in Disordered Porous Media. *Physical Review Letters*, **2017**, 119, 075501	7.4	40
138	Microscopic Toughness of Viscous Solids via Scratching: From Amorphous Polymers to Gas Shale. *Journal of Nanomechanics & Micromechanics*, **2017**, 7, 04017009		8
137	Mesoscale Poroelasticity of Heterogeneous Media. *Journal of Nanomechanics & Micromechanics*, **2017**, 7, 04017016		5

136	Effective Potentials and Elastic Properties in the Lattice-Element Method: Isotropy and Transverse Isotropy. *Journal of Nanomechanics & Micromechanics*, **2017**, 7, 04017007		14
135	Methodology for Estimation of Nanoscale Hardness via Atomistic Simulations. *Journal of Nanomechanics & Micromechanics*, **2017**, 7, 04017011		12
134	Fracture toughness anomalies: Viewpoint of topological constraint theory. *Acta Materialia*, **2016**, 121, 234-239	8.4	62
133	Velocity statistics of the Nagel-Schreckenberg model. *Physical Review E*, **2016**, 93, 022305	2.4	6
132	Early-Age Stress and Pressure Developments in a Wellbore Cement Liner: Application to Eccentric Geometries. *Journal of Applied Mechanics, Transactions ASME*, **2016**, 83,	2.7	7
131	Radial fracture in a three-phase composite: Application to wellbore cement liners at early ages. *Engineering Fracture Mechanics*, **2016**, 154, 272-287	4.2	8
130	Nanochemo-mechanical signature of organic-rich shales: a coupled indentationâEDX analysis. *Acta Geotechnica*, **2016**, 11, 559-572	4.9	71
129	Mesoscale texture of cement hydrates. *Proceedings of the National Academy of Sciences of the United States of America*, **2016**, 113, 2029-34	11.5	143
128	Realistic molecular model of kerogen's nanostructure. *Nature Materials*, **2016**, 15, 576-82	27	236
127	Nanomechanics of organic-rich shales: the role of thermal maturity and organic matter content on texture. *Acta Geotechnica*, **2016**, 11, 775-787	4.9	47
126	A molecular informed poroelastic model for organic-rich, naturally occurring porous geocomposites. *Journal of the Mechanics and Physics of Solids*, **2016**, 88, 186-203	5	16
125	Free Volume Theory of Hydrocarbon Mixture Transport in Nanoporous Materials. *Journal of Physical Chemistry Letters*, **2016**, 7, 3712-3717	6.4	57
124	Risk of Pavement Fracture due to Eigenstresses at Early Ages and Beyond. *Journal of Engineering Mechanics - ASCE*, **2016**, 142, 04016105	2.4	2
123	Size-Effect Law for Scratch Tests of Axisymmetric Shape. *Journal of Engineering Mechanics - ASCE*, **2016**, 142, 04016094	2.4	13
122	Experimental chemo-mechanics of early-age fracture properties of cement paste. *Cement and Concrete Research*, **2015**, 75, 42-52	10.3	35
121	Subcontinuum mass transport of condensed hydrocarbons in nanoporous media. *Nature Communications*, **2015**, 6, 6949	17.4	184
120	Physical Origins of Thermal Properties of Cement Paste. *Physical Review Applied*, **2015**, 3,	4.3	66
119	Optimized molecular reconstruction procedure combining hybrid reverse Monte Carlo and molecular dynamics. *Journal of Chemical Physics*, **2015**, 142, 114112	3.9	22

118	Rigidity transition in materials: hardness is driven by weak atomic constraints. *Physical Review Letters*, **2015**, 114, 125502	7.4	86
117	C-S-H across Length Scales: From Nano to Micron **2015**,		1
116	Inference of the phase-to-mechanical property link via coupled X-ray spectrometry and indentation analysis: Application to cement-based materials. *Cement and Concrete Research*, **2015**, 67, 271-285	10.3	58
115	Nano-chemo-mechanical signature of conventional oil-well cement systems: Effects of elevated temperature and curing time. *Cement and Concrete Research*, **2015**, 67, 103-121	10.3	78
114	Roughness-Induced Vehicle Energy Dissipation: Statistical Analysis and Scaling. *Journal of Engineering Mechanics - ASCE*, **2015**, 141, 04015046	2.4	18
113	Creep of Bulk C-S-H: Insights from Molecular Dynamics Simulations **2015**,		7
112	Bottom-up model of adsorption and transport in multiscale porous media. *Physical Review E*, **2015**, 91, 032133	2.4	30
111	The Meso-Scale Texture of Cement Hydrate Gels: Out-of-Equilibrium Evolution and Thermodynamic Driving **2015**,		1
110	Shrinkage Due to Colloidal Force Interactions **2015**,		2
109	An improved technique for characterizing the fracture toughness via scratch test experiments. *Wear*, **2014**, 313, 117-124	3.5	82
108	Irwin?s conjecture: Crack shape adaptability in transversely isotropic solids. *Journal of the Mechanics and Physics of Solids*, **2014**, 68, 1-13	5	6
107	Plane-Strain Crack Problem in Transversely Isotropic Solids for Hydraulic Fracturing Applications. *Journal of Engineering Mechanics - ASCE*, **2014**, 140, 04014092	2.4	14
106	Nano-scale mechanics of colloidal C-S-H gels. *Soft Matter*, **2014**, 10, 491-9	3.6	55
105	Combinatorial molecular optimization of cement hydrates. *Nature Communications*, **2014**, 5, 4960	17.4	260
104	Atomic-scale modelling of elastic and failure properties of clays. *Molecular Physics*, **2014**, 112, 1294-1305	1.7	44
103	Simultaneous assessment of phase chemistry, phase abundance and bulk chemistry with statistical electron probe micro-analyses: Application to cement clinkers. *Cement and Concrete Research*, **2014**, 55, 35-48	10.3	17
102	Anomalous composition-dependent dynamics of nanoconfined water in the interlayer of disordered calcium-silicates. *Journal of Chemical Physics*, **2014**, 140, 054515	3.9	96
101	Order and disorder in calcium-silicate-hydrate. *Journal of Chemical Physics*, **2014**, 140, 214503	3.9	78

100	A soft matter in construction â Statistical physics approach to formation and mechanics of CâSâH gels in cement. *European Physical Journal: Special Topics*, **2014**, 223, 2285-2295	2.3	27
99	Discussion: Strength-to-fracture scaling in scratching. *Engineering Fracture Mechanics*, **2014**, 119, 21-28	4.2	31
98	Chemoelastic Fracture Mechanics Model for Cement Sheath Integrity. *Journal of Engineering Mechanics - ASCE*, **2014**, 140, 04013009	2.4	7
97	Nanoindentation investigation of creep properties of calcium silicate hydrates. *Cement and Concrete Research*, **2013**, 52, 38-52	10.3	167
96	Creep Properties of Cementitious Materials from Indentation Testing: Significance, Influence of Relative Humidity, and Analogy Between C-S-H and Soils **2013**,		4
95	Fracture scaling relations for scratch tests of axisymmetric shape. *Journal of the Mechanics and Physics of Solids*, **2012**, 60, 379-390	5	43
94	Scratch hardness â Strength solutions for cohesive-frictional materials. *International Journal for Numerical and Analytical Methods in Geomechanics*, **2012**, 36, 307-326	4	19
93	Nano-Engineering of Concrete. *Arabian Journal for Science and Engineering*, **2012**, 37, 481-488		19
92	Confined water dissociation in microporous defective silicates: mechanism, dipole distribution, and impact on substrate properties. *Journal of the American Chemical Society*, **2012**, 134, 2208-15	16.4	216
91	Nanostructure and nanomechanics of cement: polydisperse colloidal packing. *Physical Review Letters*, **2012**, 109, 155503	7.4	133
90	Nanochemomechanical assessment of shale: a coupled WDS-indentation analysis. *Acta Geotechnica*, **2012**, 7, 271-295	4.9	48
89	Innovationspotenzial Beton: Von Atomen zur Grünen Infrastruktur. *Beton- Und Stahlbetonbau*, **2012** , 107, 504-509	1	5
88	Evidence on the Dual Nature of Aluminum in the Calcium-Silicate-Hydrates Based on Atomistic Simulations. *Journal of the American Ceramic Society*, **2012**, 95, n/a-n/a	3.8	24
87	Quantifying plasticity-independent creep compliance and relaxation of viscoelastoplastic materials under contact loading. *Journal of Materials Research*, **2012**, 27, 302-312	2.5	49
86	Experimental determination of the fracture toughness via microscratch tests: Application to polymers, ceramics, and metals. *Journal of Materials Research*, **2012**, 27, 485-493	2.5	89
85	Set in stone? A perspective on the concrete sustainability challenge. *MRS Bulletin*, **2012**, 37, 395-402	3.2	42
84	Homogenization of Cohesive-Frictional Strength Properties of Porous Composites: Linear Comparison Composite Approach. *Journal of Nanomechanics & Micromechanics*, **2011**, 1, 11-23		14
83	The nanogranular origin of friction and cohesion in shale â A strength homogenization approach to interpretation of nanoindentation results. *International Journal for Numerical and Analytical Methods in Geomechanics*, **2011**, 35, 1854-1876	4	61

82	Scratch test model for the determination of fracture toughness. *Engineering Fracture Mechanics*, **2011**, 78, 334-342	4.2	80
81	The scratch test for strength and fracture toughness determination of oil well cements cured at high temperature and pressure. *Cement and Concrete Research*, **2011**, 41, 942-946	10.3	42
80	Empirical force fields for complex hydrated calcio-silicate layered materials. *Physical Chemistry Chemical Physics*, **2011**, 13, 1002-11	3.6	177
79	Impact of Chemical Impurities on the Crystalline Cement Clinker Phases Determined by Atomistic Simulations. *Crystal Growth and Design*, **2011**, 11, 2964-2972	3.5	72
78	Scratching as a fracture process: from butter to steel. *Physical Review Letters*, **2011**, 106, 204302	7.4	81
77	A Coupled Nanoindentation/SEM-EDS Study on Low Water/Cement Ratio Portland Cement Paste: Evidence for C□S□H/Ca(OH)2 Nanocomposites. *Journal of the American Ceramic Society*, **2010**, 93, 1484	3.8	171
76	Does microstructure matter for statistical nanoindentation techniques?. *Cement and Concrete Composites*, **2010**, 32, 92-99	8.6	101
75	Nanogranular packing of C□S□H at substochiometric conditions. *Cement and Concrete Research*, **2010**, 40, 14-26	10.3	197
74	Nanoindentation analysis as a two-dimensional tool for mapping the mechanical properties of complex surfaces. *Journal of Materials Research*, **2009**, 24, 679-690	2.5	132
73	Multiporoelasticity of Hierarchically Structured Materials: Micromechanical Foundations and Application to Bone. *Journal of Engineering Mechanics - ASCE*, **2009**, 135, 382-394	2.4	32
72	Nanogranular origin of concrete creep. *Proceedings of the National Academy of Sciences of the United States of America*, **2009**, 106, 10552-7	11.5	287
71	The effect of particle shape and grain-scale properties of shale: A micromechanics approach. *International Journal for Numerical and Analytical Methods in Geomechanics*, **2009**, 34, n/a-n/a	4	4
70	First-Principles Study of Elastic Constants and Interlayer Interactions of Complex Hydrated Oxides: Case Study of Tobermorite and Jennite. *Journal of the American Ceramic Society*, **2009**, 92, 2323-2330	3.8	150
69	Comment on â□Elastic modulus and hardness of muscovite and rectorite determined by nanoindentationâ□ by G. Zhang, Z. Wei and R.E. Ferrell [Applied Clay Science 43 (2009) 271-281]. *Applied Clay Science*, **2009**, 46, 425-428	5.2	8
68	A realistic molecular model of cement hydrates. *Proceedings of the National Academy of Sciences of the United States of America*, **2009**, 106, 16102-7	11.5	547
67	The nanogranular acoustic signature of shale. *Geophysics*, **2009**, 74, D65-D84	3.1	42
66	GeoMechanics Field Characterization of the Two Prolific U.S. Mid-West Gas Plays with Advanced Wire-Line Logging Tools **2009**,		15
65	Indentation analysis of fractional viscoelastic solids. *Journal of Mechanics of Materials and Structures*, **2009**, 4, 523-550	1.2	22

64	Scaling relations for viscoelastic â□cohesive conical indentation. *International Journal of Materials Research*, **2008**, 99, 836-846	0.5	9
63	The nano-mechanical morphology of shale. *Mechanics of Materials*, **2008**, 40, 318-337	3.3	160
62	Hardnessâ□packing density scaling relations for cohesive-frictional porous materials. *Journal of the Mechanics and Physics of Solids*, **2008**, 56, 924-952	5	60
61	Surface roughness criteria for cement paste nanoindentation. *Cement and Concrete Research*, **2008**, 38, 467-476	10.3	261
60	Does Câ□Sâ□H particle shape matter? A discussion of the paper â□Modelling elasticity of a hydrating cement pasteâ□by Julien Sanahuja, Luc Dormieux and Gilles Chanvillard. CCR 37 (2007) 1427â□1439. *Cement and Concrete Research*, **2008**, 38, 1126-1129	10.3	11
59	The nano-mechanical signature of Ultra High Performance Concrete by statistical nanoindentation techniques. *Cement and Concrete Research*, **2008**, 38, 1447-1456	10.3	323
58	An algorithm for computing the compressive strength of heterogeneous cohesive-frictional materials â□Application to cement paste. *Computers and Geotechnics*, **2007**, 34, 254-266	4.4	8
57	A multi-technique investigation of the nanoporosity of cement paste. *Cement and Concrete Research*, **2007**, 37, 329-336	10.3	279
56	The nanogranular behavior of C-S-H at elevated temperatures (up to 700 °C). *Cement and Concrete Research*, **2007**, 37, 1-12	10.3	174
55	Reply to discussion of the paper â□A multi-technique investigation of the nanoporosity of cement pasteâ□*Cement and Concrete Research*, **2007**, 37, 1374-1375	10.3	3
54	The nanogranular nature of Câ□Sâ□H. *Journal of the Mechanics and Physics of Solids*, **2007**, 55, 64-90	5	537
53	Statistical Indentation Techniques for Hydrated Nanocomposites: Concrete, Bone, and Shale. *Journal of the American Ceramic Society*, **2007**, 90, 2677-2692	3.8	368
52	Analysis of deformation coupled surface remodeling in porous biomaterials. *Journal of Materials Science*, **2007**, 42, 8873-8884	4.3	3
51	The effect of the nanogranular nature of shale on their poroelastic behavior. *Acta Geotechnica*, **2007**, 2, 155-182	4.9	101
50	The nanogranular nature of shale. *Acta Geotechnica*, **2006**, 1, 77-88	4.9	148
49	Nanogranular origins of the strength of bone. *Nano Letters*, **2006**, 6, 2520-5	11.5	133
48	**2006**,		248
47	Dual-indentation technique for the assessment of strength properties of cohesive-frictional materials. *International Journal of Solids and Structures*, **2006**, 43, 1727-1745	3.1	73

46	Viscoelastic solutions for conical indentation. *International Journal of Solids and Structures*, **2006**, 43, 3142-3165	3.1	123
45	Grid indentation analysis of composite microstructure and mechanics: Principles and validation. *Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing* , **2006**, 430, 189-202	5.3	382
44	Microporodynamics of Bones: Prediction of the â€œFrenkelâ€“Biotâ€ Slow Compressional Wave. *Journal of Engineering Mechanics - ASCE*, **2005**, 131, 918-927	2.4	24
43	Drained and Undrained Poroelastic Properties of Healthy and Pathological Bone: A Poro-Micromechanical Investigation. *Transport in Porous Media*, **2005**, 58, 243-268	3.1	53
42	Biological Structures Mitigate Catastrophic Fracture Through Various Strategies. *International Journal of Fracture*, **2005**, 135, 187-197	2.3	43
41	Does Calcium Leaching Increase Ductility of Cementitious Materials? Evidence from Direct Tensile Tests. *Journal of Materials in Civil Engineering*, **2005**, 17, 307-312	3	10
40	Experimental Microporomechanics **2005**, 207-288		15
39	Poro-Micromechanics of Bone: Impact Loading and Wave Propagation. *Materials Research Society Symposia Proceedings*, **2004**, 844, 1		1
38	Can the diverse elastic properties of trabecular and cortical bone be attributed to only a few tissue-independent phase properties and their interactions? Arguments from a multiscale approach. *Biomechanics and Modeling in Mechanobiology*, **2004**, 2, 219-38	3.8	105
37	The effect of two types of C-S-H on the elasticity of cement-based materials: Results from nanoindentation and micromechanical modeling. *Cement and Concrete Research*, **2004**, 34, 67-80	10.3	705
36	Explicit approximations of the indentation modulus of elastically orthotropic solids for conical indenters. *International Journal of Solids and Structures*, **2004**, 41, 7351-7360	3.1	131
35	Is concrete a poromechanics material? - A multiscale investigation of poroelastic properties. *Materials and Structures/Materiaux Et Constructions*, **2004**, 37, 43-58	3.4	35
34	Average hydroxyapatite concentration is uniform in the extracollagenous ultrastructure of mineralized tissues: evidence at the 1-10-microm scale. *Biomechanics and Modeling in Mechanobiology*, **2003**, 2, 21-36	3.8	71
33	Volume and deviator creep of calcium-leached cement-based materials. *Cement and Concrete Research*, **2003**, 33, 1127-1136	10.3	73
32	Poroplastic properties of calcium-leached cement-based materials. *Cement and Concrete Research*, **2003**, 33, 1155-1173	10.3	67
31	A multiscale micromechanics-hydration model for the early-age elastic properties of cement-based materials. *Cement and Concrete Research*, **2003**, 33, 1293-1309	10.3	378
30	Elements of chemomechanics of calcium leaching of cement-based materials at different scales. *Engineering Fracture Mechanics*, **2003**, 70, 871-889	4.2	55
29	Homogenization of bone elasticity based on tissue-independent (â€œuniversalâ€) phase properties. *Proceedings in Applied Mathematics and Mechanics*, **2003**, 3, 56-59	0.2	2

28	Scale transitions in bone elasticity from the nanometer level up to cortical and trabecular bone **2003**, 1711-1714		
27	Computational mechanics of the steelâ€concrete interface. *International Journal for Numerical and Analytical Methods in Geomechanics*, **2002**, 26, 99-120	4	25
26	Residual design strength of cement-based materials for nuclear waste storage systems. *Nuclear Engineering and Design*, **2002**, 211, 51-60	1.8	27
25	Are mineralized tissues open crystal foams reinforced by crosslinked collagen? Some energy arguments. *Journal of Biomechanics*, **2002**, 35, 1199-1212	2.9	109
24	Micromechanical Model for Ultrastructural Stiffness of Mineralized Tissues. *Journal of Engineering Mechanics - ASCE*, **2002**, 128, 898-908	2.4	96
23	Effect of Inclusions on Friction Coefficient of Highly Filled Composite Materials. *Journal of Engineering Mechanics - ASCE*, **2002**, 128, 876-884	2.4	34
22	Creep and shrinkage of concrete: physical origins and practical measurements. *Nuclear Engineering and Design*, **2001**, 203, 143-158	1.8	120
21	Hybrid method for quantification of stress states in shotcrete tunnel shells: combination of 3D in situ displacement measurements and thermochemoplastic material law. *Computers and Structures*, **2001**, 79, 2103-2115	4.5	37
20	Mechanical properties of calcium-leached cement pastes. *Cement and Concrete Research*, **2001**, 31, 767-774	1.643	143
19	Similarity properties of demineralization and degradation of cracked porous materials. *International Journal of Solids and Structures*, **2001**, 38, 7079-7100	3.1	21
18	Coupled Diffusion-Dissolution Around a Fracture Channel: The Solute Congestion Phenomenon. *Transport in Porous Media*, **2001**, 45, 479-495	3.1	15
17	What Is a â€Massiveâ€Concrete Structure at Early Ages? Some Dimensional Arguments. *Journal of Engineering Mechanics - ASCE*, **2001**, 127, 512-522	2.4	36
16	Modeling of Early-Age Creep of Shotcrete. I: Model and Model Parameters. *Journal of Engineering Mechanics - ASCE*, **2000**, 126, 284-291	2.4	67
15	Durability Scaling of Cracking in HPC Structures Subject to Hygromechanical Gradients. *Journal of Structural Engineering*, **1999**, 125, 693-702	3	6
14	The â€Tunnelâ€Fire. I: Chemoplastic Softening in Rapidly Heated Concrete. *Journal of Engineering Mechanics - ASCE*, **1999**, 125, 272-282	2.4	145
13	Multisurface Chemoplasticity. II: Numerical Studies on NATM Tunneling. *Journal of Engineering Mechanics - ASCE*, **1999**, 125, 702-713	2.4	11
12	The â€Tunnelâ€Fire. II: Analysis of Concrete Damage. *Journal of Engineering Mechanics - ASCE*, **1999**, 125, 283-289	2.4	106
11	Multisurface Chemoplasticity. I: Material Model for Shotcrete. *Journal of Engineering Mechanics - ASCE*, **1999**, 125, 692-701	2.4	57

10	Steelâ□oncrete interface: revisiting constitutive and numerical modeling. *Computers and Structures*, **1999**, 71, 489-503	4.5	22
9	Use of neural networks for fitting of FE probabilistic scaling model parameters. *International Journal of Fracture*, **1999**, 95, 315-324	2.3	9
8	Consistent linearization in Finite Element analysis of coupled chemo-thermal problems with exo- or endothermal reactions. *Computational Mechanics*, **1999**, 24, 238-244	4	35
7	Chemoporoplasticity of Calcium Leaching in Concrete. *Journal of Engineering Mechanics - ASCE*, **1999**, 125, 1200-1211	2.4	85
6	Couplings in early-age concrete: From material modeling to structural design. *International Journal of Solids and Structures*, **1998**, 35, 4295-4311	3.1	85
5	Microprestress-Solidification Theory for Concrete Creep. I: Aging and Drying Effects. *Journal of Engineering Mechanics - ASCE*, **1997**, 123, 1188-1194	2.4	297
4	Compressive Behavior of Concrete: Physical Mechanisms and Modeling. *Journal of Engineering Mechanics - ASCE*, **1996**, 122, 1038-1043	2.4	32
3	Strength Growth as Chemo-Plastic Hardening in Early Age Concrete. *Journal of Engineering Mechanics - ASCE*, **1996**, 122, 1123-1132	2.4	134
2	Modeling of Thermochemomechanical Couplings of Concrete at Early Ages. *Journal of Engineering Mechanics - ASCE*, **1995**, 121, 785-794	2.4	185
1	Bottom-Up: From Atoms to Concrete Structures1-18		