

Paul Bowen

List of Publications by Year in descending order

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101
papers

5,247
citations

81743

39
h-index

88477

70
g-index

104
all docs

104
docs citations

104
times ranked

6168
citing authors

#	ARTICLE	IF	CITATIONS
1	Molecular dynamic simulations of cementitious systems using a newly developed force field suite ERICA FF. Cement and Concrete Research, 2022, 154, 106712.	4.6	8
2	Understanding of the factors slowing down metakaolin reaction in limestone calcined clay cement (LC3) at late ages. Cement and Concrete Research, 2021, 146, 106477.	4.6	49
3	Interactions of Tris with rutile surfaces and consequences for in vitro bioactivity testing. Open Ceramics, 2021, 7, 100173.	1.0	0
4	Spark Plasma Sintering of Ceramics: From Modeling to Practice. Ceramics, 2020, 3, 476-493.	1.0	10
5	The Atomic-Level Structure of Cementitious Calcium Aluminate Silicate Hydrate. Journal of the American Chemical Society, 2020, 142, 11060-11071.	6.6	107
6	Kinetics and Mechanism of Metal Nanoparticle Growth via Optical Extinction Spectroscopy and Computational Modeling: The Curious Case of Colloidal Gold. ACS Nano, 2019, 13, 11510-11521.	7.3	12
7	Rapid evaluation of bioactive Ti-based surfaces using an in vitro titration method. Nature Communications, 2019, 10, 2062.	5.8	18
8	Adsorption Free Energy of Single Amino Acids at the Rutile (110)/Water Interface Studied by Well-Tempered Metadynamics. Journal of Physical Chemistry C, 2018, 122, 11355-11363.	1.5	21
9	An atomistic building block description of C-S-H - Towards a realistic C-S-H model. Cement and Concrete Research, 2018, 107, 221-235.	4.6	78
10	Interaction of biologically relevant ions and organic molecules with titanium oxide (rutile) surfaces: A review on molecular dynamics studies. Colloids and Surfaces B: Biointerfaces, 2018, 161, 563-577.	2.5	30
11	Thermodynamic-Kinetic Precipitation Modeling. A Case Study: The Amorphous Calcium Carbonate (ACC) Precipitation Pathway Unravelling. Crystal Growth and Design, 2017, 17, 2006-2015.	1.4	42
12	A comparative study of simulated body fluids in the presence of proteins. Acta Biomaterialia, 2017, 53, 506-514.	4.1	18
13	Development of a processing route for carbon allotrope-based TiC porous nanocomposites. Journal of the European Ceramic Society, 2017, 37, 3899-3908.	2.8	15
14	Comparison of apparent activation energies for densification of alumina powders by pulsed electric current sintering (spark plasma sintering) and conventional sintering toward applications for transparent polycrystalline alumina. Journal of Materials Research, 2017, 32, 3309-3318.	1.2	7
15	A discussion on the paper "Role of porosity on the stiffness and stability of (001) surface of the nanogranular C-S-H gel". Cement and Concrete Research, 2017, 102, 227-230.	4.6	6
16	: A force field database for cementitious materials including validations, applications and opportunities. Cement and Concrete Research, 2017, 102, 68-89.	4.6	186
17	Non-invasive continuous monitoring of pro-oxidant effects of engineered nanoparticles on aquatic microorganisms. Journal of Nanobiotechnology, 2017, 15, 19.	4.2	13
18	Synergistic Effect of Fluorinated and N Doped TiO2 Nanoparticles Leading to Different Microstructure and Enhanced Photocatalytic Bacterial Inactivation. Nanomaterials, 2017, 7, 391.	1.9	51

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19	Synthesis and Sintering of ZnO Nanopowders. <i>Technologies</i> , 2017, 5, 28.	3.0	9
20	Pro-oxidant effects of nano-TiO ₂ on <i>Chlamydomonas reinhardtii</i> during short-term exposure. <i>RSC Advances</i> , 2016, 6, 115271-115283.	1.7	8
21	Atomistic Simulations of Silicate Species Interaction with Portlandite Surfaces. <i>Journal of Physical Chemistry C</i> , 2016, 120, 22407-22413.	1.5	18
22	Grain boundary complexion and transparent polycrystalline alumina from an atomistic simulation perspective. <i>Current Opinion in Solid State and Materials Science</i> , 2016, 20, 278-285.	5.6	8
23	New approach to low thermal conductivity of thermal barrier protection with improved mechanical integrity. <i>Ceramics International</i> , 2016, 42, 6817-6824.	2.3	1
24	Atomistic simulation of the adsorption of calcium and hydroxyl ions onto portlandite surfaces towards crystal growth mechanisms. <i>Cement and Concrete Research</i> , 2016, 81, 16-23.	4.6	37
25	Predicting the yield stress of paraffin-wax suspensions. <i>Powder Technology</i> , 2016, 291, 1-6.	2.1	4
26	Toward Knowledge-Based Grain Boundary Engineering of Transparent Alumina Combining Advanced TEM and Atomistic Modeling. <i>Journal of the American Ceramic Society</i> , 2015, 98, 1959-1964.	1.9	9
27	Continuous Polyol Synthesis of Metal and Metal Oxide Nanoparticles Using a Segmented Flow Tubular Reactor (SFTR). <i>Molecules</i> , 2015, 20, 10566-10581.	1.7	14
28	How colloid-colloid interactions and hydrodynamic effects influence the percolation threshold: A simulation study in alumina suspensions. <i>Journal of Colloid and Interface Science</i> , 2015, 458, 241-246.	5.0	12
29	Surface 3D Micro Free Forms: Multifunctional Microstructured Mesoporous γ -Alumina by in Situ Slip Casting Using Excimer Laser Ablated Polycarbonate Molds. <i>ACS Applied Materials & Interfaces</i> , 2015, 7, 24458-24469.	4.0	12
30	Physicochemical Characterization of Nebulized Superparamagnetic Iron Oxide Nanoparticles (SPIONs). <i>Journal of Aerosol Medicine and Pulmonary Drug Delivery</i> , 2015, 28, 43-51.	0.7	25
31	Colloidal Processing and Yield Stress Modeling Towards Dry Pressed Green Bodies for Transparent Polycrystalline Alumina. <i>Advanced Engineering Materials</i> , 2014, 16, 774-784.	1.6	7
32	Segregation of anion (Cl ⁻) impurities at transparent polycrystalline γ -alumina interfaces. <i>Journal of the European Ceramic Society</i> , 2014, 34, 3037-3045.	2.8	4
33	Influence of Y and La Additions on Grain Growth and the Grain Boundary Character Distribution of Alumina. <i>Journal of the American Ceramic Society</i> , 2014, 97, 622-630.	1.9	27
34	Atomistic Modeling of Effect of Mg on Oxygen Vacancy Diffusion in γ -Alumina. <i>Journal of the American Ceramic Society</i> , 2014, 97, 2596-2601.	1.9	17
35	Bioavailability of inorganic nanoparticles to planktonic bacteria and aquatic microalgae in freshwater. <i>Environmental Science: Nano</i> , 2014, 1, 214.	2.2	75
36	Continuous Production of Tailored Silver Nanoparticles by Polyol Synthesis and Reaction Yield Measured by X-ray Absorption Spectroscopy: Toward a Growth Mechanism. <i>Journal of Physical Chemistry C</i> , 2014, 118, 11093-11103.	1.5	19

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37	Modification of titania nanoparticles for photocatalytic antibacterial activity via a colloidal route with glycine and subsequent annealing. <i>Journal of Materials Research</i> , 2013, 28, 354-361.	1.2	21
38	Nanopore Characterization and Optical Modeling of Transparent Polycrystalline Alumina. <i>Advanced Functional Materials</i> , 2012, 22, 2303-2309.	7.8	49
39	Freeze granulation: Powder processing for transparent alumina applications. <i>Journal of the European Ceramic Society</i> , 2012, 32, 2899-2908.	2.8	41
40	Atomistic modeling of the effect of codoping on the atomistic structure of interfaces in γ -alumina. <i>Journal of the European Ceramic Society</i> , 2012, 32, 2935-2948.	2.8	12
41	Fuerzas de repulsi3n de aditivos superplastificantes en sistemas de escoria granulada de horno alto en medios alcalinos, desde medidas de AFM a propiedades reol3gicas. <i>Materiales De Construccion</i> , 2012, 62, 489-513.	0.2	31
42	Hamaker 2: A Toolkit for the Calculation of Particle Interactions and Suspension Stability and its Application to Mullite Synthesis by Colloidal Methods. <i>Journal of Dispersion Science and Technology</i> , 2011, 32, 470-479.	1.3	43
43	Atomistic modeling of dopant segregation in γ -alumina ceramics: Coverage dependent energy of segregation and nominal dopant solubility. <i>Journal of the European Ceramic Society</i> , 2011, 31, 2839-2852.	2.8	18
44	Changes in portlandite morphology with solvent composition: Atomistic simulations and experiment. <i>Cement and Concrete Research</i> , 2011, 41, 1330-1338.	4.6	69
45	Precipitation of Nanosized and Nanostructured Powders: Process Intensification and Scale-Out Using a Segmented Flow Tubular Reactor (SFTR). <i>Chemical Engineering and Technology</i> , 2011, 34, 344-352.	0.9	28
46	Synthesis of porous and nanostructured particles of CuO via a copper oxalate route. <i>Powder Technology</i> , 2011, 208, 467-471.	2.1	25
47	Properties of lanthanum doped BaTiO ₃ produced from nanopowders. <i>Ceramics International</i> , 2010, 36, 1817-1824.	2.3	84
48	Growth modification of seeded calcite using carboxylic acids: Atomistic simulations. <i>Journal of Colloid and Interface Science</i> , 2010, 346, 226-231.	5.0	63
49	Polymer-assisted precipitation of ZnO nanoparticles with narrow particle size distribution. <i>Journal of the European Ceramic Society</i> , 2010, 30, 591-598.	2.8	71
50	Transparent polycrystalline alumina using spark plasma sintering: Effect of Mg, Y and La doping. <i>Journal of the European Ceramic Society</i> , 2010, 30, 1335-1343.	2.8	101
51	Theoretical Assessment of Nd:YAG Ceramic Laser Performance by Microstructural and Optical Modeling. <i>Journal of the American Ceramic Society</i> , 2010, 93, 814-820.	1.9	17
52	Innovative High-Surface-Area CuO Pretreated Cotton Effective in Bacterial Inactivation under Visible Light. <i>ACS Applied Materials & Interfaces</i> , 2010, 2, 2547-2552.	4.0	57
53	Contribution of Aggregation to the Growth Mechanism of Seeded Calcium Carbonate Precipitation in the Presence of Polyacrylic Acid. <i>Journal of Physical Chemistry B</i> , 2010, 114, 12058-12067.	1.2	27
54	Growth Modification of Seeded Calcite by Carboxylic Acid Oligomers and Polymers: Toward an Understanding of Complex Growth Mechanisms. <i>Crystal Growth and Design</i> , 2010, 10, 3956-3963.	1.4	32

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55	Additive-Assisted Aqueous Synthesis of BaTiO ₃ Nanopowders. <i>Crystal Growth and Design</i> , 2010, 10, 3996-4004.	1.4	20
56	Control of morphology and nanostructure of copper and cobalt oxalates: Effect of complexing ions, polymeric additives and molecular weight. <i>Nanoscale</i> , 2010, 2, 2470.	2.8	15
57	Fabrication and Characterisation of Cathode Support-tubes for Micro-tubular SOFC Application. <i>ECS Transactions</i> , 2009, 25, 2597-2606.	0.3	2
58	Oxygen vacancy diffusion in alumina: New atomistic simulation methods applied to an old problem. <i>Acta Materialia</i> , 2009, 57, 4765-4772.	3.8	36
59	Cathode-supported micro-tubular SOFCs based on Nd _{1.95} NiO ₄ ·xH ₂ O: Fabrication and characterisation of dip-coated electrolyte layers. <i>Solid State Ionics</i> , 2009, 180, 805-811.	1.3	17
60	A thermodynamic solution model for calcium carbonate: Towards an understanding of multi-equilibria precipitation pathways. <i>Journal of Colloid and Interface Science</i> , 2009, 340, 218-224.	5.0	31
61	Adsorption of superplasticizer admixtures on alkali-activated slag pastes. <i>Cement and Concrete Research</i> , 2009, 39, 670-677.	4.6	161
62	Inactivation of E. coli mediated by high surface area CuO accelerated by light irradiation >360nm. <i>Journal of Photochemistry and Photobiology A: Chemistry</i> , 2008, 199, 105-111.	2.0	86
63	Design and function of novel superplasticizers for more durable high performance concrete (superplast project). <i>Cement and Concrete Research</i> , 2008, 38, 1197-1209.	4.6	205
64	Surface and Mirror Twin Grain Boundary Segregation in Nd:YAG: An Atomistic Simulation Study. <i>Journal of the American Ceramic Society</i> , 2008, 91, 2698-2705.	1.9	19
65	Atomistic Simulation of Y-Doped Al ₂ O ₃ Alumina Interfaces. <i>Journal of the American Ceramic Society</i> , 2008, 91, 3643-3651.	1.9	29
66	Effect of Mixing and Other Operating Parameters in Sol-Gel Processes. <i>Industrial & Engineering Chemistry Research</i> , 2008, 47, 7202-7210.	1.8	49
67	Impact of small amounts of swelling clays on the physical properties of debris-flow-like granular materials. Implications for the study of alpine debris flow. <i>Earth Surface Processes and Landforms</i> , 2007, 32, 698-710.	1.2	11
68	Effect of particle size on LiMnPO ₄ cathodes. <i>Journal of Power Sources</i> , 2007, 174, 949-953.	4.0	325
69	Yield Stress of Multimodal Powder Suspensions: An Extension of the YODEL (Yield Stress mODEL). <i>Journal of the American Ceramic Society</i> , 2007, 90, 1038-1044.	1.9	100
70	Precipitation of Nanostructured Copper Oxalate: Substructure and Growth Mechanism. <i>Journal of Physical Chemistry B</i> , 2006, 110, 17763-17771.	1.2	50
71	Formation and Drying of Colloidal Crystals Using Nanosized Silica Particles. <i>Langmuir</i> , 2006, 22, 2249-2257.	1.6	39
72	Yodel: A Yield Stress Model for Suspensions. <i>Journal of the American Ceramic Society</i> , 2006, 89, 1244-1256.	1.9	285

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73	Atomistic Modeling Study of Surface Segregation in Nd:YAG. Journal of the American Ceramic Society, 2006, 89, 3812-3816.	1.9	28
74	A thermodynamic model for the precipitation of nanostructured copper oxalates. Journal of Crystal Growth, 2006, 289, 278-285.	0.7	10
75	Catalytic activity of commercial TiO ₂ powders for the abatement of the bacteria (E. coli) under solar simulated light: Influence of the isoelectric point. Applied Catalysis B: Environmental, 2006, 63, 76-84.	10.8	203
76	Colloidal processing and sintering of nanosized transition aluminas. Powder Technology, 2005, 157, 100-107.	2.1	83
77	Photocatalytic Storing of O ₂ as H ₂ O ₂ Mediated by High Surface Area CuO. Evidence for a Reductive/Oxidative Interfacial Mechanism. Langmuir, 2005, 21, 8554-8559.	1.6	59
78	Use of Seeds to Control Precipitation of Calcium Carbonate and Determination of Seed Nature. Langmuir, 2005, 21, 100-108.	1.6	64
79	Fabrication of large-area ordered arrays of nanoparticles on patterned substrates. Nanotechnology, 2005, 16, 1311-1316.	1.3	93
80	Aggregation and Charging of Colloidal Silica Particles: Effect of Particle Size. Langmuir, 2005, 21, 5761-5769.	1.6	352
81	Spark Plasma Sintering of Nano-Crystalline Ceramics. Key Engineering Materials, 2004, 264-268, 2297-2300.	0.4	21
82	High-quality nickel manganese oxalate powders synthesized in a new segmented flow tubular reactor. Solid State Ionics, 2004, 171, 135-140.	1.3	36
83	Growth and Self-assembly of Nanostructured CoC ₂ O ₄ ·2H ₂ O Particles. Journal of Physical Chemistry B, 2004, 108, 13128-13136.	1.2	49
84	Electrostatic repulsion between particles in cement suspensions: Domain of validity of linearized Poisson-Boltzmann equation for nonideal electrolytes. Cement and Concrete Research, 2003, 33, 781-791.	4.6	84
85	The influence of concentration on the formation of BaTiO ₃ by direct reaction of TiCl ₄ with Ba(OH) ₂ in aqueous solution. Journal of the European Ceramic Society, 2003, 23, 1383-1390.	2.8	44
86	Colloidal Processing of Nanoceramic Powders for Porous Ceramic Film Applications. Key Engineering Materials, 2002, 206-213, 1977-1980.	0.4	6
87	Particle Size Distribution Measurement and Assessment of Agglomeration of Commercial Nanosized Ceramic Particles. Journal of Dispersion Science and Technology, 2002, 23, 619-630.	1.3	46
88	Particle Size Distribution Measurement from Millimeters to Nanometers and from Rods to Platelets. Journal of Dispersion Science and Technology, 2002, 23, 631-662.	1.3	138
89	Particle size distribution measurement of anisotropic particles cylinders and platelets practical examples. Powder Technology, 2002, 128, 256-261.	2.1	33
90	From powders to sintered pieces: forming, transformations and sintering of nanostructured ceramic oxides. Powder Technology, 2002, 128, 248-255.	2.1	155

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91	Precipitation of Self-Organized Copper Oxalate Polycrystalline Particles in the Presence of Hydroxypropylmethylcellulose (HPMC): Control of Morphology. <i>Journal of Colloid and Interface Science</i> , 2000, 226, 189-198.	5.0	138
92	Calcination and morphological evolution of cubic copper oxalate particles. <i>Journal of Materials Science Letters</i> , 2000, 19, 1073-1075.	0.5	18
93	New morphology of calcium oxalate trihydrate precipitated in a segmented flow tubular reactor. <i>Journal of Materials Science Letters</i> , 2000, 19, 749-750.	0.5	40
94	Aqueous Synthesis of Mixed Yttrium-Barium Oxalates. <i>Chemistry of Materials</i> , 1999, 11, 712-718.	3.2	8
95	Aqueous solubility of Y, Ba and Cu oxalates in the system $[Y(OH)_3, Ba(OH)_2, Cu(OH)_2] \cdot H_2C_2O_4 \cdot [HNO_3/NaOH] \cdot H_2O$. <i>Journal of Crystal Growth</i> , 1994, 135, 135-144.	0.7	10
96	Accurate submicron particle size measurement of alumina and quartz powders using a cuvette photocentrifuge. <i>Powder Technology</i> , 1994, 81, 235-240.	2.1	6
97	An approach to improve the accuracy of sub-micron particle size distribution measurement using the Horiba CAPA-700. <i>Powder Technology</i> , 1993, 74, 67-71.	2.1	9
98	Synthesis of Si_3N_4 Powder by Thermal Decomposition of $Si(NH)_2$. <i>Materials Research Society Symposia Proceedings</i> , 1992, 287, 227.	0.1	1
99	Plasma-Sprayed-Yttria Layers for Corrosion Resistance. <i>Journal of the American Ceramic Society</i> , 1992, 75, 1005-1007.	1.9	16
100	Degradation of Aluminum Nitride Powder in an Aqueous Environment. <i>Journal of the American Ceramic Society</i> , 1990, 73, 724-728.	1.9	202
101	Diffuse-reflectance Fourier-transform infrared spectroscopic studies of the stability of aluminum nitride powder in an aqueous environment. <i>Analytical Chemistry</i> , 1989, 61, 2399-2402.	3.2	41