Paul Bowen

List of Publications by Year
in descending order

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	Aggregation and Charging of Colloidal Silica Particles:Â Effect of Particle Size. Langmuir, 2005, 21, 5761-5769.	1.6	352
2	Effect of particle size on LiMnPO4 cathodes. Journal of Power Sources, 2007, 174, 949-953.	4.0	325
3	Yodel: A Yield Stress Model for Suspensions. Journal of the American Ceramic Society, 2006, 89, 1244-1256.	1.9	285
4	Design and function of novel superplasticizers for more durable high performance concrete (superplast project). Cement and Concrete Research, 2008, 38, 1197-1209.	4.6	205
5	Catalytic activity of commercial of TiO2 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
6	Degradation of Aluminum Nitride Powder in an Aqueous Environmet. Journal of the American Ceramic Society, 1990, 73, 724-728.	1.9	202
7	: A force field database for cementitious materials including validations, applications and opportunities. Cement and Concrete Research, 2017, 102, 68-89.	4.6	186
8	Adsorption of superplasticizer admixtures on alkali-activated slag pastes. Cement and Concrete Research, 2009, 39, 670-677.	4.6	161
9	From powders to sintered pieces: forming, transformations and sintering of nanostructured ceramic oxides. Powder Technology, 2002, 128, 248-255.	2.1	155
10	Precipitation of Self-Organized Copper Oxalate Polycrystalline Particles in the Presence of Hydroxypropylmethylcellulose (HPMC): Control of Morphology. Journal of Colloid and Interface Science, 2000, 226, 189-198.	5.0	138
11	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
12	The Atomic-Level Structure of Cementitious Calcium Aluminate Silicate Hydrate. Journal of the American Chemical Society, 2020, 142, 11060-11071.	6.6	107
13	Transparent polycrystalline alumina using spark plasma sintering: Effect of Mg, Y and La doping. Journal of the European Ceramic Society, 2010, 30, 1335-1343.	2.8	101
14	Yield Stress of Multimodal Powder Suspensions: An Extension of the YODEL (Yield Stress mODEL). Journal of the American Ceramic Society, 2007, 90, 1038-1044.	1.9	100
15	Fabrication of large-area ordered arrays of nanoparticles on patterned substrates. Nanotechnology, 2005, 16, 1311-1316.	1.3	93
16	Inactivation of E. coli mediated by high surface area CuO accelerated by light irradiation >360nm. Journal of Photochemistry and Photobiology A: Chemistry, 2008, 199, 105-111.	2.0	86
17	Electrostatic repulsion between particles in cement suspensions: Domain of validity of linearized Poissonâ€“Boltzmann equation for nonideal electrolytes. Cement and Concrete Research, 2003, 33, 781-791.	4.6	84
18	Properties of lanthanum doped BaTiO3 produced from nanopowders. Ceramics International, 2010, 36, 1817-1824.	2.3	84

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19	Colloidal processing and sintering of nanosized transition aluminas. Powder Technology, 2005, 157, 100-107.	2.1	83
20	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
21	Bioavailability of inorganic nanoparticles to planktonic bacteria and aquatic microalgae in freshwater. Environmental Science: Nano, 2014, 1, 214.	2.2	75
22	Polymer-assisted precipitation of ZnO nanoparticles with narrow particle size distribution. Journal of the European Ceramic Society, 2010, 30, 591-598.	2.8	71
23	Changes in portlandite morphology with solvent composition: Atomistic simulations and experiment. Cement and Concrete Research, 2011, 41, 1330-1338.	4.6	69
24	Use of Seeds to Control Precipitation of Calcium Carbonate and Determination of Seed Nature. Langmuir, 2005, 21, 100-108.	1.6	64
25	Growth modification of seeded calcite using carboxylic acids: Atomistic simulations. Journal of Colloid and Interface Science, 2010, 346, 226-231.	5.0	63
26	Photocatalytic Storing of O2as H2O2Mediated by High Surface Area CuO. Evidence for a Reductiveâ^'Oxidative Interfacial Mechanism. Langmuir, 2005, 21, 8554-8559.	1.6	59
27	Innovative High-Surface-Area CuO Pretreated Cotton Effective in Bacterial Inactivation under Visible Light. ACS Applied Materials & Interfaces, 2010, 2, 2547-2552.	4.0	57
28	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
29	Precipitation of Nanostructured Copper Oxalate:Â Substructure and Growth Mechanism. Journal of Physical Chemistry B, 2006, 110, 17763-17771.	1.2	50
30	Growth and Self-assembly of Nanostructured CoC2O4Â·2H2O Particles. Journal of Physical Chemistry B, 2004, 108, 13128-13136.	1.2	49
31	Effect of Mixing and Other Operating Parameters in Solâ^'Gel Processes. Industrial & Engineering Chemistry Research, 2008, 47, 7202-7210.	1.8	49
32	Nanopore Characterization and Optical Modeling of Transparent Polycrystalline Alumina. Advanced Functional Materials, 2012, 22, 2303-2309.	7.8	49
33	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
34	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
35	The influence of concentration on the formation of BaTiO3 by direct reaction of TiCl4 with Ba(OH)2 in aqueous solution. Journal of the European Ceramic Society, 2003, 23, 1383-1390.	2.8	44
36	Hamaker 2: A Toolkit for the Calculation of Particle Interactions and Suspension Stability and its Application to Mullite Synthesis by Colloidal Methods. Journal of Dispersion Science and Technology, 2011, 32, 470-479.	1.3	43

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37	Thermodynamic-Kinetic Precipitation Modeling. A Case Study: The Amorphous Calcium Carbonate (ACC) Precipitation Pathway Unravelled. Crystal Growth and Design, 2017, 17, 2006-2015.	1.4	42
38	Diffuse-reflectance Fourier-transform infrared spectroscopic studies of the stability of aluminum nitride powder in an aqueous environment. Analytical Chemistry, 1989, 61, 2399-2402.	3.2	41
39	Freeze granulation: Powder processing for transparent alumina applications. Journal of the European Ceramic Society, 2012, 32, 2899-2908.	2.8	41
40	New morphology of calcium oxalate trihydrate precipitated in a segmented flow tubular reactor. Journal of Materials Science Letters, 2000, 19, 749-750.	0.5	40
41	Formation and Drying of Colloidal Crystals Using Nanosized Silica Particles. Langmuir, 2006, 22, 2249-2257.	1.6	39
42	Atomistic simulation of the adsorption of calcium and hydroxyl ions onto portlandite surfaces â€" towards crystal growth mechanisms. Cement and Concrete Research, 2016, 81, 16-23.	4.6	37
43	High-quality nickel manganese oxalate powders synthesized in a new segmented flow tubular reactor. Solid State Ionics, 2004, 171, 135-140.	1.3	36
44	Oxygen vacancy diffusion in alumina: New atomistic simulation methods applied to an old problem. Acta Materialia, 2009, 57, 4765-4772.	3.8	36
45	Particle size distribution measurement of anisotropicâ€"particles cylinders and plateletsâ€"practical examples. Powder Technology, 2002, 128, 256-261.	2.1	33
46	Growth Modification of Seeded Calcite by Carboxylic Acid Oligomers and Polymers: Toward an Understanding of Complex Growth Mechanisms. Crystal Growth and Design, 2010, 10, 3956-3963.	1.4	32
47	A thermodynamic solution model for calcium carbonate: Towards an understanding of multi-equilibria precipitation pathways. Journal of Colloid and Interface Science, 2009, 340, 218-224.	5.0	31
48	Fuerzas de repulsiÃ³n de aditivos superplastificantes en sistemas de escoria granulada de horno alto en medios alcalinos, desde medidas de AFM a propiedades reolÃ³gicas. Materiales De Construccion, 2012, 62, 489-513.	0.2	31
49	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
50	Atomistic Simulation of Yâ€Doped Î±â€Alumina Interfaces. Journal of the American Ceramic Society, 2008, 91, 3643-3651.	1.9	29
51	Atomistic Modeling Study of Surface Segregation in Nd:YAG. Journal of the American Ceramic Society, 2006, 89, 3812-3816.	1.9	28
52	Precipitation of Nanosized and Nanostructured Powders: Process Intensification and Scaleâ€Out Using a Segmented Flow Tubular Reactor (SFTR). Chemical Engineering and Technology, 2011, 34, 344-352.	0.9	28
53	Contribution of Aggregation to the Growth Mechanism of Seeded Calcium Carbonate Precipitation in the Presence of Polyacrylic Acid. Journal of Physical Chemistry B, 2010, 114, 12058-12067.	1.2	27
54	Influence of <scp><scp>Y</scp></scp> and <scp><scp>La</scp></scp> Additions on Grain Growth and the Grainâ€Boundary Character Distribution of Alumina. Journal of the American Ceramic Society, 2014, 97, 622-630.	1.9	27

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55	Synthesis of porous and nanostructured particles of CuO via a copper oxalate route. Powder Technology, 2011, 208, 467-471.	2.1	25
56	Physicochemical Characterization of Nebulized Superparamagnetic Iron Oxide Nanoparticles (SPIONs). Journal of Aerosol Medicine and Pulmonary Drug Delivery, 2015, 28, 43-51.	0.7	25
57	Spark Plasma Sintering of Nano-Crystalline Ceramics. Key Engineering Materials, 2004, 264-268, 2297-2300.	0.4	21
58	Modification of titania nanoparticles for photocatalytic antibacterial activity via a colloidal route with glycine and subsequent annealing. Journal of Materials Research, 2013, 28, 354-361.	1.2	21
59	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
60	Additive-Assisted Aqueous Synthesis of BaTiO₃ Nanopowders. Crystal Growth and Design, 2010, 10, 3996-4004.	1.4	20
61	Surface and Mirror Twin Grain Boundary Segregation in Nd:YAG: An Atomistic Simulation Study. Journal of the American Ceramic Society, 2008, 91, 2698-2705.	1.9	19
62	Continuous Production of Tailored Silver Nanoparticles by Polyol Synthesis and Reaction Yield Measured by X-ray Absorption Spectroscopy: Toward a Growth Mechanism. Journal of Physical Chemistry C, 2014, 118, 11093-11103.	1.5	19
63	Calcination and morphological evolution of cubic copper oxalate particles. Journal of Materials Science Letters, 2000, 19, 1073-1075.	0.5	18
64	Atomistic modeling of dopant segregation in Î±-alumina ceramics: Coverage dependent energy of segregation and nominal dopant solubility. Journal of the European Ceramic Society, 2011, 31, 2839-2852.	2.8	18
65	Atomistic Simulations of Silicate Species Interaction with Portlandite Surfaces. Journal of Physical Chemistry C, 2016, 120, 22407-22413.	1.5	18
66	A comparative study of simulated body fluids in the presence of proteins. Acta Biomaterialia, 2017, 53, 506-514.	4.1	18
67	Rapid evaluation of bioactive Ti-based surfaces using an in vitro titration method. Nature Communications, 2019, 10, 2062.	5.8	18
68	Cathode-supported micro-tubular SOFCs based on Nd1.95NiO4+Î´: Fabrication and characterisation of dip-coated electrolyte layers. Solid State Ionics, 2009, 180, 805-811.	1.3	17
69	Theoretical Assessment of Nd:YAG Ceramic Laser Performance by Microstructural and Optical Modeling. Journal of the American Ceramic Society, 2010, 93, 814-820.	1.9	17
70	Atomistic Modeling of Effect of Mg on Oxygen Vacancy Diffusion in Î±â€Alumina. Journal of the American Ceramic Society, 2014, 97, 2596-2601.	1.9	17
71	Plasma-Sprayed-Yttria Layers for Corrosion Resistance. Journal of the American Ceramic Society, 1992, 75, 1005-1007.	1.9	16
72	Control of morphology and nanostructure of copper and cobalt oxalates: Effect of complexing ions, polymeric additives and molecular weight. Nanoscale, 2010, 2, 2470.	2.8	15

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73	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
74	Continuous Polyol Synthesis of Metal and Metal Oxide Nanoparticles Using a Segmented Flow Tubular Reactor (SFTR). Molecules, 2015, 20, 10566-10581.	1.7	14
75	Non-invasive continuous monitoring of pro-oxidant effects of engineered nanoparticles on aquatic microorganisms. Journal of Nanobiotechnology, 2017, 15, 19.	4.2	13
76	Atomistic modeling of the effect of codoping on the atomistic structure of interfaces in Î±-alumina. Journal of the European Ceramic Society, 2012, 32, 2935-2948.	2.8	12
77	How colloidâ€“colloid interactions and hydrodynamic effects influence the percolation threshold: A simulation study in alumina suspensions. Journal of Colloid and Interface Science, 2015, 458, 241-246.	5.0	12
78	Surface 3D Micro Free Forms: Multifunctional Microstructured Mesoporous Î±-Alumina by in Situ Slip Casting Using Excimer Laser Ablated Polycarbonate Molds. ACS Applied Materials & Interfaces, 2015, 7, 24458-24469.	4.0	12
79	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
80	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. Earth Surface Processes and Landforms, 2007, 32, 698-710.	1.2	11
81	Aqueous solubility of Y, Ba and Cu oxalates in the system [Y(OH)3, Ba(OH)2, Cu(OH)2]-H2C2O4-[HNO3/NaOH]-H2O. Journal of Crystal Growth, 1994, 135, 135-144.	0.7	10
82	A thermodynamic model for the precipitation of nanostructured copper oxalates. Journal of Crystal Growth, 2006, 289, 278-285.	0.7	10
83	Spark Plasma Sintering of Ceramics: From Modeling to Practice. Ceramics, 2020, 3, 476-493.	1.0	10
84	An approach to improve the accuracy of sub-micron particle size distribution measurement using the Horiba CAPA-700. Powder Technology, 1993, 74, 67-71.	2.1	9
85	Toward Knowledgeâ€Based Grainâ€Boundary Engineering of Transparent Alumina Combining Advanced <scp>TEM</scp> and Atomistic Modeling. Journal of the American Ceramic Society, 2015, 98, 1959-1964.	1.9	9
86	Synthesis and Sintering of ZnO Nanopowders. Technologies, 2017, 5, 28.	3.0	9
87	Aqueous Synthesis of Mixed Yttriumâ€'Barium Oxalates. Chemistry of Materials, 1999, 11, 712-718.	3.2	8
88	Pro-oxidant effects of nano-TiO₂on Chlamydomonas reinhardtii during short-term exposure. RSC Advances, 2016, 6, 115271-115283.	1.7	8
89	Grain boundary complexion and transparent polycrystalline alumina from an atomistic simulation perspective. Current Opinion in Solid State and Materials Science, 2016, 20, 278-285.	5.6	8
90	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

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91	Colloidal Processing and Yield Stress Modeling Towards Dry Pressed Green Bodies for Transparent Polycrystalline Alumina. Advanced Engineering Materials, 2014, 16, 774-784.	1.6	7
92	Comparison of apparent activation energies for densification of alumina powders by pulsed electric current sintering (spark plasma sintering) and conventional sinteringâ€"toward applications for transparent polycrystalline alumina. Journal of Materials Research, 2017, 32, 3309-3318.	1.2	7
93	Accurate submicron particle size measurement of alumina and quartz powders using a cuvette photocentrifuge. Powder Technology, 1994, 81, 235-240.	2.1	6
94	Colloidal Processing of Nanoceramic Powders for Porous Ceramic Film Applications. Key Engineering Materials, 2002, 206-213, 1977-1980.	0.4	6
95	A discussion on the paper â€œRole of porosity on the stiffness and stability of (001) surface of the nanogranular Câ€"Sâ€"H gelâ€• Cement and Concrete Research, 2017, 102, 227-230.	4.6	6
96	Segregation of anion (Clâ^') impurities at transparent polycrystalline Î±-alumina interfaces. Journal of the European Ceramic Society, 2014, 34, 3037-3045.	2.8	4
97	Predicting the yield stress of paraffin-wax suspensions. Powder Technology, 2016, 291, 1-6.	2.1	4
98	Fabrication and Characterisation of Cathode Support-tubes for Micro-tubular SOFC Application. ECS Transactions, 2009, 25, 2597-2606.	0.3	2
99	Synthesis of Si3N4 Powder by Thermal Decomposition of SI(NH)2. Materials Research Society Symposia Proceedings, 1992, 287, 227.	0.1	1
100	New approach to low thermal conductivity of thermal barrier protection with improved mechanical integrity. Ceramics International, 2016, 42, 6817-6824.	2.3	1
101	Interactions of Tris with rutile surfaces and consequences for in vitro bioactivity testing. Open Ceramics, 2021, 7, 100173.	1.0	0