I-Wei Chen

List of Publications by Citations

344 papers	16,079 citations	64 h-index	121 g-index
364 ext. papers	17,210 ext. citations	7 avg, IF	6.77 L-index

#	Paper	IF	Citations
344	Nitrogen-doped mesoporous carbon of extraordinary capacitance for electrochemical energy storage. *Science*, **2015**, 350, 1508-13	33.3	1530
343	Sintering dense nanocrystalline ceramics without final-stage grain growth. *Nature*, **2000**, 404, 168-71	50.4	1126
342	Effect of Dopants on Zirconia Stabilization—An X-ray Absorption Study: I, Trivalent Dopants. *Journal of the American Ceramic Society*, **1994**, 77, 118-128	3.8	464
341	Development of Superplastic Structural Ceramics. *Journal of the American Ceramic Society*, **1990**, 73, 2585-2609	3.8	447
340	Reactive Cerium(IV) Oxide Powders by the Homogeneous Precipitation Method. *Journal of the American Ceramic Society*, **1993**, 76, 1577-1583	3.8	315
339	A tough SiAlON ceramic based on β-Si3N4 with a whisker-like microstructure. *Nature*, **1997**, 389, 701-704	50.4	303
338	Quantum-dot-tagged reduced graphene oxide nanocomposites for bright fluorescence bioimaging and photothermal therapy monitored in situ. *Advanced Materials*, **2012**, 24, 1748-54	24	301
337	Two-Step Sintering of Ceramics with Constant Grain-Size, I. Y2O3. *Journal of the American Ceramic Society*, **2006**, 89, 431-437	3.8	293
336	Nucleation and growth mechanism of ferroelectric domain-wall motion. *Nature*, **2007**, 449, 881-4	50.4	280
335	Improved Thermoelectric Properties of Cu-Doped Quaternary Chalcogenides of Cu2CdSnSe4. *Advanced Materials*, **2009**, 21, 3808-3812	24	275
334	Two-Step Sintering of Ceramics with Constant Grain-Size, II: BaTiO3 and Ni□Cu□Zn Ferrite. *Journal of the American Ceramic Society*, **2006**, 89, 438-443	3.8	275
333	A wide-band-gap p-type thermoelectric material based on quaternary chalcogenides of Cu2ZnSnQ4 (Q=S,Se). *Applied Physics Letters*, **2009**, 94, 202103	3.4	268
332	Biomedical nanoparticle carriers with combined thermal and magnetic responses. *Nano Today*, **2009**, 4, 52-65	17.9	250
331	X-ray-absorption studies of zirconia polymorphs. I. Characteristic local structures. *Physical Review B*, **1993**, 48, 10063-10073	3.3	222
330	Iron oxide nanoparticles as magnetic resonance contrast agent for tumor imaging via folate receptor-targeted delivery. *Academic Radiology*, **2004**, 11, 996-1004	4.3	221
329	Temperature□Time Texture Transition of Pb(Zr1−xTix)O3 Thin Films: I, Role of Pb-rich Intermediate Phases. *Journal of the American Ceramic Society*, **1994**, 77, 2332-2336	3.8	214
328	Grain Size Control of Tetragonal Zirconia Polycrystals Using the Space Charge Concept. *Journal of the American Ceramic Society*, **1990**, 73, 3269-3277	3.8	205

327	X-ray-absorption studies of zirconia polymorphs. II. Effect of Y2O3 dopant on ZrO2 structure. *Physical Review B*, **1993**, 48, 10074-10081	3.3	185
326	Effect of Dopants on Zirconia Stabilization—An X-ray Absorption Study: II, Tetravalent Dopants. *Journal of the American Ceramic Society*, **1994**, 77, 1281-1288	3.8	184
325	Grain Growth in CeO2: Dopant Effects, Defect Mechanism, and Solute Drag. *Journal of the American Ceramic Society*, **1996**, 79, 1793-1800	3.8	182
324	Implications of Transformation Plasticity in ZrO2-Containing Ceramics: I, Shear and Dilatation Effects. *Journal of the American Ceramic Society*, **1986**, 69, 181-189	3.8	178
323	A Robust and Conductive Black Tin Oxide Nanostructure Makes Efficient Lithium-Ion Batteries Possible. *Advanced Materials*, **2017**, 29, 1700136	24	173
322	Transformation Plasticity of CeO2-Stabilized Tetragonal Zirconia Polycrystals: I, Stress Assistance and Autocatalysis. *Journal of the American Ceramic Society*, **1988**, 71, 343-353	3.8	170
321	A new tubular graphene form of a tetrahedrally connected cellular structure. *Advanced Materials*, **2015**, 27, 5943-9	24	163
320	Grain Boundary Mobility in Y2O3: Defect Mechanism and Dopant Effects. *Journal of the American Ceramic Society*, **1996**, 79, 1801-1809	3.8	159
319	Creep cavitation in 304 stainless steel. *Acta Metallurgica*, **1981**, 29, 1321-1333		159
318	The effect of silica nanoparticle-modified surfaces on cell morphology, cytoskeletal organization and function. *Biomaterials*, **2008**, 29, 3836-46	15.6	152
317	Diffusive growth of grain-boundary cavities. *Acta Metallurgica*, **1981**, 29, 1759-1768		152
316	Sintering of Fine Oxide Powders: II, Sintering Mechanisms. *Journal of the American Ceramic Society*, **1997**, 80, 637-645	3.8	140
315	Texture Development, Microstructure Evolution, and Crystallization of Chemically Derived PZT Thin Films. *Journal of the American Ceramic Society*, **2005**, 81, 97-105	3.8	139
314	Temperature–Time Texture Transition of Pb(Zr1−xTix)O3 Thin Films: II, Heat Treatment and Compositional Effects. *Journal of the American Ceramic Society*, **1994**, 77, 2337-2344	3.8	133
313	Effect of Dopants on Zirconia Stabilization—An X-ray Absorption Study: III, Charge-Compensating Dopants. *Journal of the American Ceramic Society*, **1994**, 77, 1289-1295	3.8	130
312	Transformation Plasticity of CeO2-Stabilized Tetragonal Zirconia Polycrystals: II, Pseudoelasticity and Shape Memory Effect. *Journal of the American Ceramic Society*, **1988**, 71, 648-657	3.8	128
311	Core-shell nanocapsules stabilized by single-component polymer and nanoparticles for magneto-chemotherapy/hyperthermia with multiple drugs. *Advanced Materials*, **2012**, 24, 3627-32	24	122
310	Sintering of Fine Oxide Powders: I, Microstructural Evolution. *Journal of the American Ceramic Society*, **1996**, 79, 3129-3141	3.8	119

309	Fatigue of Pb(Zr0.53Ti0.47)O3 ferroelectric thin films. *Journal of Applied Physics*, **1998**, 83, 7789-7798	2.5	118
308	Ferroelectric Thin Films of Bismuth-Containing Layered Perovskites: Part I, Bi4Ti3O12. *Journal of the American Ceramic Society*, **1998**, 81, 3253-3259	3.8	112
307	Temperature-Sensitive Nanocapsules for Controlled Drug Release Caused by Magnetically Triggered Structural Disruption. *Advanced Functional Materials*, **2009**, 19, 616-623	15.6	108
306	Fatigue of Yttria-Stabilized Zirconia: I, Fatigue Damage, Fracture Origins, and Lifetime Prediction. *Journal of the American Ceramic Society*, **1991**, 74, 1197-1205	3.8	106
305	Computer Simulation of Final-Stage Sintering: I, Model Kinetics, and Microstructure. *Journal of the American Ceramic Society*, **1990**, 73, 2857-2864	3.8	102
304	Theory and experiment of martensitic nucleation in ZrO2 containing ceramics and ferrous alloys. *Acta Metallurgica*, **1985**, 33, 1827-1845		101
303	Exaggerated Texture and Grain Growth in a Supperplastic SiAlON. *Journal of the American Ceramic Society*, **1992**, 75, 2733-2741	3.8	97
302	Role of Defect Interaction in Boundary Mobility and Cation Diffusivity of CeO2. *Journal of the American Ceramic Society*, **1994**, 77, 2289-2297	3.8	94
301	Fatigue of Yttria-Stabilized Zirconia: II, Crack Propagation, Fatigue Striations, and Short-Crack Behavior. *Journal of the American Ceramic Society*, **1991**, 74, 1206-1216	3.8	91
300	Martensitic nucleation in ZrO2. *Acta Metallurgica*, **1983**, 31, 1627-1638		91
299	Superplastic Flow of Two-Phase Ceramics Containing Rigid Inclusions: Zirconia/Mullite Composites. *Journal of the American Ceramic Society*, **1990**, 73, 1555-1565	3.8	89
298	Deformation and Grain Growth of Low-Temperature-Sintered High-Purity Alumina. *Journal of the American Ceramic Society*, **1990**, 73, 3518-3521	3.8	88
297	Cubic-to-Tetragonal (t') Transformation in Zirconia-Containing Systems. *Journal of the American Ceramic Society*, **1992**, 75, 1108-1116	3.8	87
296	NIR-Triggered Synergic Photo-chemothermal Therapy Delivered by Reduced Graphene Oxide/Carbon/Mesoporous Silica Nanocookies. *Advanced Functional Materials*, **2014**, 24, 451-459	15.6	85
295	Enhanced Grain Boundary Mobility in Yttria-Stabilized Cubic Zirconia under an Electric Current. *Journal of the American Ceramic Society*, **2011**, 94, 4231-4238	3.8	85
294	Bisphosphonate-mediated gene vector delivery from the metal surfaces of stents. *Proceedings of the National Academy of Sciences of the United States of America*, **2006**, 103, 159-64	11.5	85
293	In-Situ Alumina/Aluminate Platelet Composites. *Journal of the American Ceramic Society*, **1992**, 75, 2610-2612	3.8	85
292	RES blockade: A strategy for boosting efficiency of nanoparticle drug. *Nano Today*, **2015**, 10, 11-21	17.9	84

291	Photoresponsive Protein□Graphene□Protein Hybrid Capsules with Dual Targeted Heat-Triggered Drug Delivery Approach for Enhanced Tumor Therapy. *Advanced Functional Materials*, **2014**, 24, 4144-4155	15.6	83
290	Structural origin of relaxor perovskites. *Journal of Physics and Chemistry of Solids*, **1996**, 57, 1525-1536	3.9	82
289	Solution Mechanisms for Dopant Oxides in Yttria. *Journal of the American Ceramic Society*, **2004**, 82, 1553-1559	3.8	80
288	Statistics of martensitic nucleation. *Acta Metallurgica*, **1985**, 33, 1847-1859		78
287	Shear Thickening Creep in Superplastic Silicon Nitride. *Journal of the American Ceramic Society*, **1992**, 75, 1073-1079	3.8	77
286	Purely electronic switching with high uniformity, resistance tunability, and good retention in Pt-dispersed SiO2 thin films for ReRAM. *Advanced Materials*, **2011**, 23, 3847-52	24	73
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282	Phase Relationships and Stability of □-SiAlON. *Journal of the American Ceramic Society*, **1999**, 82, 1025-1036	3.8	66
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280	Microstructure Control of In-Situ-Toughened □-SiAlON Ceramics. *Journal of the American Ceramic Society*, **2004**, 83, 1819-1821	3.8	64
279	Nucleation and Growth of □-SiAlON on □-Si3N4. *Journal of the American Ceramic Society*, **1994**, 77, 1711-1718	3.8	63
278	Low-Temperature Sintering of Alumina with Liquid-Forming Additives. *Journal of the American Ceramic Society*, **1991**, 74, 2011-2013	3.8	62
277	X-ray Absorption Studies of Ceria with Trivalent Dopants. *Journal of the American Ceramic Society*, **1991**, 74, 958-967	3.8	61
276	Local delivery of gene vectors from bare-metal stents by use of a biodegradable synthetic complex inhibits in-stent restenosis in rat carotid arteries. *Circulation*, **2008**, 117, 2096-103	16.7	60
275	Electrical and hydrogen reduction enhances kinetics in doped zirconia and ceria: I. grain growth study. *Journal of the American Ceramic Society*, **2017**, 100, 876-886	3.8	59
274	Predicting the Onset of Flash Sintering. *Journal of the American Ceramic Society*, **2015**, 98, 2333-2335	3.8	59

273	A size-dependent nanoscale metal-insulator transition in random materials. *Nature Nanotechnology*, **2011**, 6, 237-41	28.7	59
272	Observing Oxygen Vacancy Driven Electroforming in Pt-TiO2-Pt Device via Strong Metal Support Interaction. *Nano Letters*, **2016**, 16, 2139-44	11.5	57
271	Kinetics of phase transformations in SiAlON ceramics: I. effects of cation size, composition and temperature. *Journal of the European Ceramic Society*, **1999**, 19, 2325-2335	6	56
270	Superplastic Alumina Ceramics with Grain Growth Inhibitors. *Journal of the American Ceramic Society*, **1991**, 74, 842-845	3.8	54
269	Computer Simulation of Final-Stage Sintering: II, Influence of Initial Pore Size. *Journal of the American Ceramic Society*, **1990**, 73, 2865-2872	3.8	54
268	Nucleation and Growth of □-SiAlON. *Journal of the American Ceramic Society*, **1994**, 77, 1719-1728	3.8	53
267	Model of Transformation Toughening in Brittle Materials. *Journal of the American Ceramic Society*, **1991**, 74, 2564-2572	3.8	53
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265	X-ray-absorption studies of zirconia polymorphs. III. Static distortion and thermal distortion. *Physical Review B*, **1993**, 48, 10082-10089	3.3	52
264	Grain boundary and interphase boundary sliding in power law creep. *Acta Metallurgica*, **1979**, 27, 749-754		50
263	Mechanical and Environmental Factors in the Cyclic and Static Fatigue of Silicon Nitride. *Journal of the American Ceramic Society*, **1994**, 77, 1153-1161	3.8	49
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261	Reaction Densification of □-SiAlON: 1, Wetting Behavior and Acid-Base Reactions. *Journal of the American Ceramic Society*, **1995**, 78, 545-552	3.8	47
260	Kinetics of phase transformations in SiAlON Ceramics: II. Reaction Paths. *Journal of the European Ceramic Society*, **1999**, 19, 2337-2348	6	46
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258	Structural behavior and superconductivity of YBa2Cu3Ox. *Solid State Communications*, **1987**, 63, 997-1001	1.6	43
257	Superplastic Forming of SiAlON Ceramics. *Journal of the American Ceramic Society*, **1994**, 77, 2575-2585	3.8	42
256	Dynamic-load-enabled ultra-low power multiple-state RRAM devices. *Scientific Reports*, **2012**, 2, 744	4.9	41

255	Effect of Seeding on the Microstructure and Mechanical Properties of α-SiAlON: III, Comparison of Modifying Cations. *Journal of the American Ceramic Society*, **2003**, 86, 1168-1175	3.8	41
254	Mobility control of ceramic grain boundaries and interfaces. *Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing*, **1993**, 166, 51-58	5.3	41
253	Autonomously Controlled Homogenous Growth of Wafer-Sized High-Quality Graphene via a Smart Janus Substrate. *Advanced Functional Materials*, **2012**, 22, 1033-1039	15.6	39
252	A stochastic theory of grain growth. *Acta Metallurgica*, **1987**, 35, 1723-1733		39
251	A computational study of yttria-stabilized zirconia: II. Cation diffusion. *Acta Materialia*, **2017**, 126, 438-450	8.4	38
250	Grain Boundary Kinetics in Oxide Ceramics with the Cubic Fluorite Crystal Structure and its Derivatives. *Journal of Materials Science*, **2000**, 8, 147-156		38
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242	Controllable synthesis of silver cyanamide as a new semiconductor photocatalyst under visible-light irradiation. *Journal of Materials Chemistry A*, **2013**, 1, 7942	13	33
241	Synthesis of α-SiAlON Seed Crystals. *Journal of the American Ceramic Society*, **2004**, 84, 1651-1653	3.8	33
240	Reaction Densification of β-SiAlON: II, Densification Behavior. *Journal of the American Ceramic Society*, **1995**, 78, 553-559	3.8	33
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238	A Parallel Circuit Model for Multi-State Resistive-Switching Random Access Memory. *Advanced Functional Materials*, **2012**, 22, 546-554	15.6	32

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220	Effect of Seeding on the Microstructure and Mechanical Properties of β-SiAlON: II, Ca-β-SiAlON. *Journal of the American Ceramic Society*, **2004**, 85, 1260-1267	3.8	27

219	R-Curve Behavior of In Situ Toughened β-SiAlON Ceramics. *Journal of the American Ceramic Society*, **2001**, 84, 884-886	3.8	27
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217	Cholesterol-derivatized polyurethane: characterization and endothelial cell adhesion. *Journal of Biomedical Materials Research - Part A*, **2005**, 72, 200-12	5.4	25
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207	Scalability of voltage-controlled filamentary and nanometallic resistance memory devices. *Nanoscale*, **2017**, 9, 12690-12697	7.7	21
206	Electro-Sintering of Yttria-Stabilized Cubic Zirconia. *Journal of the American Ceramic Society*, **2013**, 96, 1398-1406	3.8	21
205	Plasticity-Induced Fatigue Damage in Ceria-Stabilized Tetragonal Zirconia Polycrystals. *Journal of the American Ceramic Society*, **1994**, 77, 2025-2035	3.8	21
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198	Oxygen potential transition in mixed conducting oxide electrolyte. *Acta Materialia*, **2018**, 156, 399-410	8.4	19
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193	Mobility transition at grain boundaries in two-step sintered 8 mol% yttria-stabilized zirconia. *Journal of the American Ceramic Society*, **2018**, 101, 1857-1869	3.8	19
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191	Resolving voltage-time dilemma using an atomic-scale lever of subpicosecond electron-phonon interaction. *Nano Letters*, **2014**, 14, 5058-67	11.5	18
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184	Morphology of Silicon Nitride Grown from a Liquid Phase. *Journal of the American Ceramic Society*, **2005**, 81, 2677-2686	3.8	16

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