Siu-Wai Chan

List of Publications by Year
in descending order

102	5,971	117453 34	69108 77
papers	citations	h-index	g-index

105	105	105	7854
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Size-dependent properties ofCeO2â^'ynanoparticles as studied by Raman scattering. Physical Review B, 2001, 64, .	1.1	871
2	Cerium and yttrium oxide nanoparticles are neuroprotective. Biochemical and Biophysical Research Communications, 2006, 342, 86-91.	1.0	657
3	Cerium oxide nanoparticles: Size-selective formation and structure analysis. Applied Physics Letters, 2002, 80, 127-129.	1.5	620
4	Cerium oxidation state in ceria nanoparticles studied with X-ray photoelectron spectroscopy and absorption near edge spectroscopy. Surface Science, 2004, 563, 74-82.	0.8	518
5	Ceria nanoparticles: Size, size distribution, and shape. Journal of Applied Physics, 2004, 95, 4319-4326.	1.1	303
6	Ionic conductivities, sintering temperatures and microstructures of bulk ceramic CeO2 doped with Y2O3. Solid State Ionics, 2000, 134, 89-102.	1.3	203
7	Structure sensitivity of the low-temperature water-gas shift reaction on Cuâ€“CeO2 catalysts. Catalysis Today, 2012, 180, 68-80.	2.2	183
8	Application of a near coincidence site lattice theory to the orientations of YBa2Cu3O7â^'xgrains on (001)â€‰MgO substrates. Applied Physics Letters, 1990, 57, 1690-1692.	1.5	153
9	Phases in Ceria-Zirconia Binary Oxide (1-x)CeO2-xZrO2 Nanoparticles: The Effect of Particle Size. Journal of the American Ceramic Society, 2006, 89, 1028-1036.	1.9	148
10	Formation of stable Cu2O from reduction of CuO nanoparticles. Applied Catalysis A: General, 2006, 303, 273-277.	2.2	138
11	â€˜Madelung modelâ€™ prediction for dependence of lattice parameter on nanocrystal size. Solid State Communications, 2002, 123, 295-297.	0.9	115
12	Epitaxy of Yâ€Baâ€Cuâ€O thin films grown on singleâ€crystal MgO. Applied Physics Letters, 1990, 56, 2243-2245.	1.5	106
13	Martensitic Phase Transformation of Isolated HfO2, ZrO2, and HfxZr1 -xO2 (0 <x < 1) Nanocrystals. Advanced Functional Materials, 2005, 15, 1595-1602.	7.8	102
14	Study of energy vs misorientation for grain boundaries in gold by crystallite rotation methodâ€”I. [001] Twist boundaries. Acta Metallurgica, 1985, 33, 1113-1119.	2.1	89
15	Scanning Tunneling Microscopy and Theoretical Study of Water Adsorption on Fe₃O₄: Implications for Catalysis. Journal of the American Chemical Society, 2012, 134, 18979-18985.	6.6	76
16	Second harmonic generation in zinc oxide nanorods. Applied Physics B: Lasers and Optics, 2006, 84, 351-355.	1.1	75
17	Charging and Chemical Reactivity of Gold Nanoparticles and Adatoms on the (111) Surface of Single-Crystal Magnetite: A Scanning Tunneling Microscopy/Spectroscopy Study. Journal of Physical Chemistry C, 2009, 113, 10198-10205.	1.5	75
18	In situ Study of the Crystallization from Amorphous to Cubic Zirconium Oxide:Â Rietveld and Reverse Monte Carlo Analyses. Chemistry of Materials, 2007, 19, 3118-3126.	3.2	74

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19	Effect of the postâ€deposition processing ambient on the preparation of superconducting YBa2Cu3O7â^'xcoevaporated thin films using a BaF2source. Applied Physics Letters, 1988, 53, 1443-1445.	1.5	71
20	Controlled synthesis of Co3O4 nanopolyhedrons and nanosheets at low temperature. Chemical Communications, 2009, , 7569.	2.2	69
21	3D-Printing Crystallographic Unit Cells for Learning Materials Science and Engineering. Journal of Chemical Education, 2015, 92, 1960-1962.	1.1	59
22	Synthesis and Redox Behavior of Nanocrystalline Hausmannite (Mn₃O₄). Chemistry of Materials, 2007, 19, 5609-5616.	3.2	55
23	Visible thermal emission from sub-band-gap laser excited cerium dioxide particles. Journal of Applied Physics, 2002, 92, 1936-1941.	1.1	54
24	Copper stabilization in beneficial use of waterworks sludge and copper-laden electroplating sludge for ceramic materials. Waste Management, 2014, 34, 1085-1091.	3.7	54
25	Study of energy vs misorientation for grain boundaries in gold by crystallite rotation methodâ€"II. Tilt boundaries and mixed boundaries. Acta Metallurgica, 1986, 34, 2191-2199.	2.1	53
26	Grain boundaries and interfaces in Y-Ba-Cu-O films laser deposited on single-crystal MgO. Physical Review B, 1990, 42, 10141-10151.	1.1	51
27	Phase stability in ceria-zirconia binary oxide nanoparticles: The effect of the Ce3+ concentration and the redox environment. Journal of Applied Physics, 2006, 99, 084313.	1.1	48
28	Microstructure of YBa2Cu3O7â^'xthin films grown on singleâ€crystal SrTiO3. Journal of Applied Physics, 1989, 65, 4719-4722.	1.1	44
29	Aqueous co-precipitation of Pd-doped cerium oxide nanoparticles: chemistry, structure, and particle growth. Journal of Materials Science, 2012, 47, 299-307.	1.7	42
30	Test for a possible â€œmeltingâ€•transition in grain boundaries in aluminum near the melting point. Scripta Metallurgica, 1985, 19, 1251-1255.	1.2	37
31	Optical characterization of surface and interface oxygen content in YBa2Cu3Ox. Applied Physics Letters, 1988, 53, 2333-2335.	1.5	36
32	Y₂BaCuO₅addition and its effects on critical currents in large grains of YBa₂Cu₃O_{7â€"Î´}: A quantitative microstructural study. Journal of Materials Research, 1996, 11, 1616-1626.	1.2	36
33	Electrical Conductivities of (CeO2)1?x(Y2O3)xThin Films. Journal of the American Ceramic Society, 2002, 85, 2222-2229.	1.9	36
34	Low-Temperature Synthesis of Zinc Oxide Nanoparticles. International Journal of Applied Ceramic Technology, 2006, 3, 272-278.	1.1	35
35	Lattice Expansion in Metal Oxide Nanoparticles: MgO, Co₃O₄, & Fe₃O₄. Journal of the American Ceramic Society, 2017, 100, 384-392.	1.9	35
36	Degenerate epitaxy, coincidence epitaxy and origin of â€œspecialâ€•boundaries in thin films. Journal of Physics and Chemistry of Solids, 1994, 55, 1137-1145.	1.9	34

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37	Preparation and microstructural study of CeO2 thin films. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 1997, 15, 85-92.	0.9	33
38	Nature of grain boundaries as related to critical currents in superconducting YBa2Cu3O7 â˜' x. Journal of Physics and Chemistry of Solids, 1994, 55, 1415-1432.	1.9	31
39	Cubic phase stabilization in nanoparticles of hafnia-zirconia oxides: Particle-size and annealing environment effects. Journal of Applied Physics, 2008, 103, .	1.1	30
40	Accessing the genomic effects of naked nanoceria in murine neuronal cells. Nanomedicine: Nanotechnology, Biology, and Medicine, 2012, 8, 599-608.	1.7	27
41	Fabrication of nano CuAl2O4 spinel for copper stabilization and antibacterial application. Journal of Hazardous Materials, 2019, 371, 550-557.	6.5	27
42	Superconducting YBa2Cu3O7â˜'xthin films on alkaline earth fluorides. Applied Physics Letters, 1989, 54, 2032-2034.	1.5	26
43	Twin engineering for high critical current densities in bulk YBa2Cu3O7â˜'Î´. Physica C: Superconductivity and Its Applications, 2006, 439, 78-84.	0.6	25
44	Shape of a twin as related to the inelastic forces acting on twinning dislocations inYBa2Cu3O7â˜'Î´. Physical Review B, 2001, 63, .	1.1	23
45	In situultra-small-angle X-ray scattering study of the solution-mediated formation and growth of nanocrystalline ceria. Journal of Applied Crystallography, 2008, 41, 918-929.	1.9	23
46	Reduction of Nano-Cu₂O: Crystallite Size Dependent and the Effect of Nano-Ceria Support. Journal of Physical Chemistry C, 2015, 119, 17667-17672.	1.5	23
47	Microstructure design by twinning in high-temperature superconductor YBa2Cu3O7â˜'Î´ for enhanced Jc at high magnetic fields. Physica C: Superconductivity and its Applications, 2007, 466, 56-60.	0.6	18
48	Atomic structure of a â˜… = 5 (310) symmetric tilt boundary in Au. Scripta Metallurgica, 1988, 22, 1093-1096.	1.2	17
49	Transport in reversibly laserâ€modified YBa2Cu3O7â˜'xsuperconducting thin films. Journal of Applied Physics, 1989, 65, 1802-1805.	1.1	16
50	Enthalpy and entropy of twin boundaries in superconducting YBa2Cu3O7â˜'x. Journal of Applied Physics, 2005, 98, 033908.	1.1	15
51	The critical current density in high fields in epitaxial thin films of Y1Ba2Cu3O7â˜'Î´â€‰: Flux pinning and pair breaking. Journal of Applied Physics, 1992, 72, 4220-4226.	1.1	14
52	Use of carbon films for passivation and environmental protection of superconducting YBa2Cu3O7â˜'x. Journal of Applied Physics, 1995, 77, 6370-6376.	1.1	14
53	Grain boundary faceting in YBa2Cu3O7â€“x bicrystal thin films on SrTiO3 substrates. Journal of Materials Research, 2002, 17, 323-335.	1.2	14
54	Size dependent compressibility of nano-ceria: Minimum near 33â€‰nm. Applied Physics Letters, 2015, 106, .	1.5	14

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55	Characterization of bilayerâ€metal contacts to high Tc superconducting films. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 1991, 9, 390-393.	0.9	12
56	Nano-crystals of ceriumâ€“hafnium binary oxide: Their size-dependent structure. Journal of Alloys and Compounds, 2015, 644, 996-1002.	2.8	12
57	Substrate Surface Decoration With ${m CeO}_{2}$ Nanoparticles: An Effective Method for Improving Flux Pinning in ${m YBa}_{2}{m Cu}_{3}{m O}_{7-delta}$ Films. IEEE Transactions on Applied Superconductivity, 2007, 17, 3720-3723.	1.1	11
58	Fabrication of submicrometer features in Y-Ba-Cu-O superconducting thin films. IEEE Transactions on Magnetics, 1989, 25, 1309-1312.	1.2	10
59	Retardation of orientation relaxation of azo-dye doped amorphous polymers upon all-optical poling. Chemical Physics Letters, 2006, 428, 371-375.	1.2	10
60	Sizeâ€Ðependent Crystal Properties of Nanocuprite. International Journal of Applied Ceramic Technology, 2016, 13, 389-394.	1.1	10
61	Rapid laserâ€induced growth of nitride and oxide layers at a beryllium/liquid interface. Journal of Applied Physics, 1987, 62, 293-295.	1.1	9
62	Mobility of grain boundary dislocations during the conservative untwisting of [001] twist boundaries. Physical Review B, 1996, 53, 16579-16586.	1.1	8
63	Twin spacing and its correlation with critical current density in melt-textured YBCO with yttria nanoparticle addition. IEEE Transactions on Applied Superconductivity, 2003, 13, 3502-3505.	1.1	8
64	Crystallite size dependency of thermal expansion in ceria nanoparticles. Materials Chemistry and Physics, 2017, 192, 311-316.	2.0	8
65	Atomic structure and energy of â^ = 5 tilt boundaries in gold. Metallurgical and Materials Transactions A - Physical Metallurgy and Materials Science, 1990, 21, 2299-2307.	1.4	7
66	Growth of superconducting Yâ€Baâ€Cuâ€O films on spinel and garnet. Applied Physics Letters, 1993, 63, 2964-2966.	1.5	7
67	The stability of Si1â^'xGex strained layers on small-area trench-isolated silicon. Journal of Materials Research, 1997, 12, 364-370.	1.2	7
68	Second harmonic generation by all-optical poling and its relaxation in the polymer films containing azo sulfonamide chromophores. Optical Materials, 2006, 29, 268-272.	1.7	7
69	Raman scattering as a contactless roomâ€temperature test of the quality of YBa2Cu3O7â^'xthin films. Journal of Applied Physics, 1989, 65, 2381-2383.	1.1	6
70	Dissipation in high T/sub c/ thin films. IEEE Transactions on Magnetics, 1989, 25, 2237-2240.	1.2	6
71	Ionic Conductivities of Doped CeO₂ Thin Films as Related to Their Microstructure. Materials Research Society Symposia Proceedings, 1995, 411, 277.	0.1	6
72	All-optical poling and second harmonic generation diagnostic of layer-by-layer assembled photoactive polyelectrolytes. Chemical Physics, 2013, 420, 7-14.	0.9	6

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73	Thermal oxygen exchange cycles in mixed manganese perovskites. Ceramics International, 2018, 44, 1343-1347.	2.3	6
74	Direct TEM observation of the welding of asperities between two single-crystal gold films. IEEE Transactions on Components, Hybrids and Manufacturing Technology, 1989, 12, 39-42.	0.4	5
75	Microstructural Correlation with Electrical Properties for Y2O3 Doped CeO2 Thin Films. Materials Research Society Symposia Proceedings, 1997, 500, 279.	0.1	5
76	High resolution transmission electron microscopy of Ba_{1â^'x}K_xBiO₃ superconductor-insulator-superconductor grain boundary tunnel junctions. Journal of Materials Research, 1998, 13, 1774-1779.	1.2	5
77	The variation of J/sub cgb/ with GB misorientation and inclination measured using the scanning SQUID microscope. IEEE Transactions on Applied Superconductivity, 2001, 11, 3880-3883.	1.1	5
78	Faceting and critical current densities of [001] high-angle tilt boundaries in YBCO films. IEEE Transactions on Applied Superconductivity, 2003, 13, 2829-2833.	1.1	5
79	Second harmonic generation and photochromic grating in polyurethane films containing diazo isoxazole chromophore. Optical Materials, 2008, 30, 1832-1839.	1.7	5
80	Crystallite-size dependency of the pressure and temperature response in nanoparticles of magnesia. Journal of Nanoparticle Research, 2017, 19, 1.	0.8	5
81	Al/Au and Cu/Au bilayerâ€metal contacts to YBa2Cu3O7â^'xthin films. Journal of Applied Physics, 1992, 71, 4082-4084.	1.1	4
82	Grain boundary conductivity and microstructure study of 4% Y₂O₃ doped CeO₂ thin films. Materials Research Society Symposia Proceedings, 1996, 453, 555.	0.1	4
83	Ionic Conductivities and Microstructures of CeO₂:Y₂0₃ Solid Electrolytes. Materials Research Society Symposia Proceedings, 1998, 548, 623.	0.1	4
84	Surface stress of nano-crystals. Materials Chemistry and Physics, 2021, 273, 125091.	2.0	4
85	Infrared studies of AB-plane oriented YBa2Cu3O7â^'Î´. Synthetic Metals, 1989, 29, 715-721.	2.1	3
86	Interface between gold and superconducting YBa₂Cu₃O_{7â^'x}. Journal of Materials Research, 1995, 10, 2428-2432.	1.2	3
87	Grain Boundary Conductivities of 0.58% Y₂0₃ Doped CeO₂ Thin Films. Materials Research Society Symposia Proceedings, 1998, 548, 629.	0.1	3
88	Synthesis Induced by Laser Irradiation at Liquid/Solid Interfaces. Materials Research Society Symposia Proceedings, 1986, 74, 287.	0.1	2
89	Raman Spectroscopy Diagnostics For HIGH-T c Thin Films. , 1990, , .		2
90	Epitaxial Formation and Characterization of CeO2 Films. Materials Research Society Symposia Proceedings, 1994, 355, 513.	0.1	2

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91	Photoresponse Of Laser Modified High-T c Superconducting Thin Films. Proceedings of SPIE, 1990, , .	0.8	1
92	Formation and morphology of superconducting Hg-1223 thick film on Ni substrate. Physica C: Superconductivity and Its Applications, 2000, 337, 79-82.	0.6	1
93	Title is missing!. Journal of Materials Science, 2000, 35, 443-448.	1.7	1
94	Grain growth simulation of [001] textured YBCO films grown on (001) substrates with large lattice misfit: Prediction of misorientations of the remaining boundaries. Journal of Electronic Materials, 2001, 30, 422-431.	1.0	1
95	Study and preparation of high-T/sub c/ superconducting (HTSC) thin films for electronic applications. IEEE Transactions on Components, Hybrids and Manufacturing Technology, 1989, 12, 558-565.	0.4	0
96	Ellipsometric Study Of YBa 2 Cu 3 O 7 -x. , 1989, , .		0
97	A reactive coevaporation system for in situ, epitaxial YBa2Cu3O7â˜'x thin film deposition. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 1991, 9, 2648-2652.	0.9	0
98	Grain Growth Simulation of [001] Textured YBCO Films Grown on (001) Substrates with Large Lattice Misfit: Prediction of Misorientations of the Remaining Boundaries. Materials Research Society Symposia Proceedings, 1995, 403, 77.	0.1	0
99	Microstructure of Film Growth from Filtrating Mono-dispersed Particle Suspension. Journal of Materials Research, 2002, 17, 1055-1060.	1.2	0
100	Retardation of the orientation relaxation of azo-dye doped amorphous polymers upon photoinduced isomerization. , 2006, 6331, 279.		0
101	Twin microstructure design in the high-temperature superconductor ${mathrm{YBa}}_{2}{mathrm{Cu}}_{3}{{m{O}}}_{7-delta }$ with nanoparticles addition for enhanced ${J}_{{m{c}}}$. Superconductor Science and Technology, 2017, 30, 115013.	1.8	0
102	MRS fall 2017 meeting. Powder Diffraction, 2018, 33, 73-74.	0.4	0