

Gideon S Grader

List of Publications by Year in descending order

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122
papers

3,691
citations

186265

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149698

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128
all docs

128
docs citations

128
times ranked

3983
citing authors

#	ARTICLE	IF	CITATIONS
1	Photoelectrochemical water splitting in separate oxygen and hydrogen cells. <i>Nature Materials</i> , 2017, 16, 646-651.	27.5	418
2	Decoupled hydrogen and oxygen evolution by a two-step electrochemical chemical cycle for efficient overall water splitting. <i>Nature Energy</i> , 2019, 4, 786-795.	39.5	296
3	The effect of dehydroxylation/amorphization degree on pozzolanic activity of kaolinite. <i>Cement and Concrete Research</i> , 2003, 33, 405-416.	11.0	239
4	Surfactant-Induced Modification of Dopants Reactivity in Sol-Gel Matrixes. <i>Journal of the American Chemical Society</i> , 1999, 121, 8533-8543.	13.7	177
5	Progress and Prospective of Nitrogen-Based Alternative Fuels. <i>Chemical Reviews</i> , 2020, 120, 5352-5436.	47.7	165
6	Thermal degradation of poly(acrylic acid) containing copper nitrate. <i>Polymer Degradation and Stability</i> , 2004, 86, 171-178.	5.8	161
7	Decoupled Photoelectrochemical Water Splitting System for Centralized Hydrogen Production. <i>Joule</i> , 2020, 4, 448-471.	24.0	91
8	Crystallographic, thermodynamic, and transport properties of the $\text{Bi}_{2}\text{Sr}_{3-x}\text{Ca}_x\text{Cu}_2\text{O}_{8+\delta}$ superconductor. <i>Physical Review B</i> , 1988, 38, 757-760.	3.2	87
9	Sol-Gel Entrapment of ET(30) in Ormosils. Interfacial Polarity-Fractality Correlation. <i>Langmuir</i> , 1996, 12, 5505-5508.	3.5	86
10	Heat Treatment of Alumina Aerogels. <i>Chemistry of Materials</i> , 1997, 9, 2464-2467.	6.7	75
11	Nitrogen-Based Fuels: A Power-Fuel Power Analysis. <i>Angewandte Chemie - International Edition</i> , 2016, 55, 8798-8805.	13.8	73
12	Influence of chemical and phase composition of mineral admixtures on their pozzolanic activity. <i>Advances in Cement Research</i> , 2002, 14, 35-41.	1.6	63
13	High-temperature resistivity of the $\text{Ba}_2\text{YCu}_3\text{O}_x$ superconductor. <i>Applied Physics Letters</i> , 1987, 51, 1115-1117.	3.3	60
14	Some effects of CO_2 , CO and H_2O upon the properties of $\text{Ba}_2\text{YCu}_3\text{O}_7$. <i>Materials Research Bulletin</i> , 1988, 23, 1491-1499.	5.2	56
15	Extraordinary Hall effect in $\text{YBa}_2\text{Cu}_3\text{O}_{7-\delta}$ superconductors. <i>Physical Review B</i> , 1988, 38, 9198-9200.	3.2	55
16	The nitrogen economy: Economic feasibility analysis of nitrogen-based fuels as energy carriers. <i>Applied Energy</i> , 2017, 185, 183-188.	10.1	50
17	Polarities of Sol-Gel-Derived Ormosils and of Their Interfaces with Solvents. <i>Chemistry of Materials</i> , 2001, 13, 3631-3634.	6.7	49
18	Superconducting $\text{Tl}_{1-x}\text{Ba}_x\text{Ca}_y\text{Cu}_2\text{O}$ films by sputtering. <i>Applied Physics Letters</i> , 1988, 53, 2102-2104.	3.3	48

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19	Improved press forging of Ba ₂ YCu ₃ O _x superconductor. Applied Physics Letters, 1988, 52, 1831-1833.	3.3	44
20	Organically Doped Metals—A New Approach to Metal Catalysis: Enhanced Ag-Catalyzed Oxidation of Methanol. Advanced Functional Materials, 2007, 17, 913-918.	14.9	44
21	Stress and field dependence of critical current in Ba ₂ YCu ₃ O _{7-x} superconductors. Applied Physics Letters, 1987, 51, 855-857.	3.3	43
22	Condensation rate of water on aqueous droplets in the transition regime. Journal of Colloid and Interface Science, 1986, 113, 421-429.	9.4	42
23	Effect of solvents and stabilizers on sol-gel deposition of Ga-doped zinc oxide TCO films. Journal of Materials Research, 2011, 26, 1309-1315.	2.6	42
24	Hall coefficient and oxygen stoichiometry in YBa ₂ Cu ₃ O _{7-x} ceramics at elevated temperatures. Physical Review B, 1988, 38, 844-847.	3.2	40
25	Entrapment of Organic Molecules within Metals. 2. Polymers in Silver. Chemistry of Materials, 2004, 16, 3197-3202.	6.7	37
26	Composite Materials with Combined Electronic and Ionic Properties. Matter, 2019, 1, 959-975.	10.0	32
27	High Performance Core/Shell Ni/Ni(OH) ₂ Electrospun Nanofiber Anodes for Decoupled Water Splitting. Advanced Functional Materials, 2021, 31, 2008118.	14.9	32
28	Electrospun Fe-Al-O Nanobelts for Selective CO ₂ Hydrogenation to Light Olefins. ACS Applied Materials & Interfaces, 2020, 12, 24855-24867.	8.0	31
29	Controlled Elemental Depth Profile in Sol-Gel-Derived PZT Films. Journal of the American Ceramic Society, 2006, 89, 2387-2393.	3.8	29
30	Effect of LaNiO ₃ electrodes and lead oxide excess on chemical solution deposition derived Pb(Zr _x Ti _{1-x})O ₃ films. Thin Solid Films, 2009, 517, 2767-2774.	1.8	28
31	Organically Doped Silver Nanoparticles Deposited on Titania Nanofibers: Enhanced Catalytic Methanol Oxidation. Journal of Physical Chemistry C, 2013, 117, 22325-22330.	3.1	28
32	YBCO Oxalate Coprecipitation in Alcoholic Solutions. Journal of the American Ceramic Society, 1994, 77, 1436-1440.	3.8	27
33	Particle sizing in the electrodynamic balance. Review of Scientific Instruments, 1986, 57, 933-936.	1.3	25
34	Persistent currents in ceramic and evaporated thin film toroids of Ba ₂ YCu ₃ O ₇ . Applied Physics Letters, 1988, 52, 328-330.	3.3	25
35	Tape Casting Slip Preparation by in Situ Polymerization. Journal of the American Ceramic Society, 1993, 76, 1809-1814.	3.8	25
36	Novel Ceramic Foams from Crystals of AlCl ₃ (Pri ₂ O) complex. Journal of Materials Research, 1999, 14, 1485-1494.	2.6	25

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37	Interrelation of preparation conditions, morphology, chemical reactivity and homogeneity of ceramic YBCO. <i>Physica C: Superconductivity and Its Applications</i> , 2003, 400, 25-35.	1.2	25
38	Nitrogen-based alternative fuel: an environmentally friendly combustion approach. <i>RSC Advances</i> , 2014, 4, 10051-10059.	3.6	25
39	Thermal shrinkage of electrospun PVP nanofibers. <i>Journal of Polymer Science, Part B: Polymer Physics</i> , 2018, 56, 248-254.	2.1	25
40	Electrospun Ionomeric Fibers with Anion Conducting Properties. <i>Advanced Functional Materials</i> , 2020, 30, 1901733.	14.9	24
41	Catalytic activity of electrospun Ag and Ag/carbon composite fibres in partial methanol oxidation. <i>Catalysis Science and Technology</i> , 2015, 5, 1153-1162.	4.1	22
42	The Evolution of Microstructure in Nonhydrolytic Alumina Xerogels. <i>Journal of Sol-Gel Science and Technology</i> , 1999, 14, 233-247.	2.4	21
43	Branching effect and morphology control in electrospun $\text{PbZr}_{0.52}\text{Ti}_{0.48}\text{O}_3$ nanofibers. <i>Journal of Materials Research</i> , 2014, 29, 1721-1729.	2.6	21
44	Thermal analysis of aqueous urea ammonium nitrate alternative fuel. <i>RSC Advances</i> , 2014, 4, 34836-34848.	3.6	20
45	Nitrogen-Based Alternative Fuel: Safety Considerations. <i>Energy Technology</i> , 2015, 3, 976-981.	3.8	20
46	Fourier transform infrared spectrometer for a single aerosol particle. <i>Review of Scientific Instruments</i> , 1987, 58, 584-587.	1.3	19
47	Alumina Foam Coated with Nanostructured Chromia Aerogel: An Efficient Catalytic Material for Complete Combustion of Chlorinated VOC. <i>Industrial & Engineering Chemistry Research</i> , 2006, 45, 7462-7469.	3.7	19
48	Pressure effect on the combustion of aqueous urea ammonium nitrate alternative fuel. <i>Fuel</i> , 2015, 159, 500-507.	6.4	19
49	Nitrogen-Based Alternative Fuels: Progress and Future Prospects. <i>Energy Technology</i> , 2016, 4, 7-18.	3.8	19
50	Experimental investigation of current-limiting device model based on high-Tc superconductors. <i>Physica C: Superconductivity and Its Applications</i> , 1993, 209, 277-280.	1.2	18
51	Thermal degradation of poly(acrylic acid) containing metal nitrates and the formation of $\text{YBa}_2\text{Cu}_3\text{O}_{7-x}$. <i>Journal of Polymer Science, Part B: Polymer Physics</i> , 2005, 43, 1168-1176.	2.1	18
52	Effect of starting particle size and vacuum processing on the yttrium barium copper oxide ($\text{YBa}_2\text{Cu}_3\text{O}_x$) phase formation. <i>Chemistry of Materials</i> , 1989, 1, 665-668.	6.7	16
53	Particle aggregation in alumina aerogels. <i>Journal of Materials Research</i> , 1997, 12, 430-433.	2.6	16
54	Reduction of $\text{Ba}_2\text{YCu}_3\text{O}_7$ and $\text{Y}_2\text{Cu}_2\text{O}_5$ by H_2 . <i>Thermochimica Acta</i> , 1989, 137, 373-381.	2.7	15

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55	Thermal behavior of the phenolâ€‘Pdâ€‘ACC system. Carbon, 2002, 40, 2547-2557.	10.3	15
56	Ceria Entrapped Palladium Novel Composites for Hydrogen Oxidation Reaction in Alkaline Medium. Journal of the Electrochemical Society, 2020, 167, 054514.	2.9	15
57	Interrelation of calcination temperature, surface area and densification of oxalate-derived YBCO. Applied Superconductivity, 1995, 3, 543-550.	0.5	14
58	Crackâ€‘Free Drying of Ceramic Foams by the Use of Viscous Cosolvents. Journal of the American Ceramic Society, 2010, 93, 3632-3636.	3.8	14
59	Corrosion of aluminum alloys Al 6061 and Al 2024 in ammonium nitrateâ€‘urea solution. Materials and Corrosion - Werkstoffe Und Korrosion, 2016, 67, 387-395.	1.5	14
60	Combustion simulations of aqueous urea ammonium nitrate monofuel at high pressures. Combustion and Flame, 2016, 166, 295-306.	5.2	14
61	Magnetization measurements of single levitated grains of Ba ₂ YCu ₃ O ₇ . Applied Physics Letters, 1988, 53, 2238-2240.	3.3	13
62	Complex formation and degradation in poly(acrylonitrile-co-vinyl acetate) containing metal nitrates. Polymer, 2004, 45, 937-947.	3.8	13
63	Complex formation and degradation in poly(acrylonitrile-co-vinyl acetate) containing copper nitrate. Journal of Polymer Science, Part B: Polymer Physics, 2004, 42, 1023-1032.	2.1	13
64	Synthesis of tungsten bronze powder and determination of its composition. Journal of Materials Science, 2007, 42, 1010-1018.	3.7	13
65	Formation of Coreâ€‘Shell Mesoporous Ceramic Fibers. Journal of the American Ceramic Society, 2017, 100, 3370-3374.	3.8	13
66	Structural and electrical properties of single Ga/ZnO nanofibers synthesized by electrospinning. Journal of Materials Research, 2012, 27, 1672-1679.	2.6	12
67	Electrospun Anion-Conducting Ionomer Fibersâ€‘Effect of Humidity on Final Properties. Polymers, 2020, 12, 1020.	4.5	12
68	Modification of Non-Hydrolytic Sol-Gel Derived Alumina by Solvent Treatments. Journal of Sol-Gel Science and Technology, 2001, 21, 157-165.	2.4	11
69	Synthesis and structural characterization of Pt/amorphous Al ₂ O ₃ catalyst. Journal of Catalysis, 2003, 214, 146-152.	6.2	11
70	Interrelation of Ferroelectricity, Morphology, and Thickness in Sol-Gel-Derived PbZr _{1-x} Ti _x O ₃ Films. Journal of the American Ceramic Society, 2007, 90, 77-83.	3.8	11
71	Activated organically doped silver: enhanced catalysis of methanol oxidation. Catalysis Science and Technology, 2011, 1, 1593.	4.1	11
72	Playing Hardball with Hydrogen: Metastable Mechanochemical Hydrogenation of Magnesium Nitride. Journal of Physical Chemistry C, 2013, 117, 1237-1246.	3.1	11

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73	Testing of an inductive current-limiting device based on high-T _c superconductors. IEEE Transactions on Applied Superconductivity, 1993, 3, 3033-3036.	1.7	10
74	Spray pyrolysis of YBCO precursors. Journal of Materials Research, 1994, 9, 2490-2500.	2.6	10
75	Effect of Aging on Alumina Gels Rheology and Aerogels Surface Area. Journal of Sol-Gel Science and Technology, 1999, 14, 131-136.	2.4	10
76	Equilibrium of 1:2:3 CLBLCO superconductors with oxygen: effect of cooling upon the oxygen content and the homogeneity of its distribution. Journal of Physics and Chemistry of Solids, 2003, 64, 273-280.	4.0	10
77	Flow Reactor Combustion of Aqueous Urea Ammonium Nitrate Fuel. Energy & Fuels, 2016, 30, 2474-2477.	5.1	10
78	Auto-ignition of a carbon-free aqueous ammonia/ammonium nitrate monofuel: A thermal and barometric analysis. Fuel Processing Technology, 2017, 159, 363-368.	7.2	10
79	Penetration dynamics of a magnetic field pulse into high- T_c superconductors. Superconductor Science and Technology, 1996, 9, 1042-1047.	3.5	9
80	Persistent currents in $Tl_{1-x}Ba_xCa_{1-x}CuO$ superconductors. Applied Physics Letters, 1988, 53, 319-320.	3.3	8
81	Corrosion inhibition of carbon steel in aqueous solution of ammonium nitrate and urea. Materials and Corrosion - Werkstoffe Und Korrosion, 2014, 65, 626-636.	1.5	8
82	Deformation Control During Thermal Treatment of Electrospun $PbZr_{0.52}Ti_{0.48}O_3$ Nanofiber Mats. Journal of the American Ceramic Society, 2016, 99, 1550-1556.	3.8	8
83	Effect of equivalence ratio on the thermal autoignition of aqueous ammonia ammonium nitrate monofuel. Combustion and Flame, 2018, 188, 142-149.	5.2	8
84	Superconductivity at 121 K in a new bulk $Tl_{1-x}Ba_xCa_xCuO$ compound. Applied Physics Letters, 1988, 53, 911-912.	3.1	7
85	Effect of sintering on TiO ₂ -impregnated alumina foams. Journal of Materials Science, 2002, 37, 4049-4055.	3.7	7
86	Preparation of carbon coated ceramic foams by pyrolysis of polyurethane. Journal of Materials Science, 2006, 41, 6046-6055.	3.7	7
87	Metal Corrosion Screening in a Nitrogen-Based Fuel at High Temperature and Pressure. Oxidation of Metals, 2014, 82, 491-508.	2.1	7
88	Solvothermal synthesis of indium-doped zinc oxide TCO films. Journal of Sol-Gel Science and Technology, 2017, 81, 3-10.	2.4	7
89	The Nitrogen Economy: The Feasibility of Using Nitrogen-Based Alternative Fuels. Energy Procedia, 2017, 135, 3-13.	1.8	7
90	Lamellar-like Electrospun Mesoporous Ti-Al-O Nanofibers. Materials, 2019, 12, 252.	2.9	7

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91	Metal nanoparticles entrapped in metal matrices. <i>Nanoscale Advances</i> , 2021, 3, 4597-4612.	4.6	7
92	Corrosion of aluminium, stainless steels and AISI 680 nickel alloy in nitrogen-based fuels. <i>Materials and Corrosion - Werkstoffe Und Korrosion</i> , 2012, 63, 571-579.	1.5	6
93	Effects of water content and diluent pressure on the ignition of aqueous ammonia/ammonium nitrate and urea/ammonium nitrate fuels. <i>Applied Energy</i> , 2018, 224, 300-308.	10.1	6
94	Electrospun nanofibers with surface oriented lamellar patterns and their potential applications. <i>Nanoscale</i> , 2020, 12, 12993-13000.	5.6	6
95	S-N transition of HIGH-Tc superconducting ring caused by induced current. <i>Applied Superconductivity</i> , 1994, 2, 123-126.	0.5	5
96	Morphological and phase composition changes during sintering of ultralight Al ₂ O ₃ TiO ₂ foams. <i>Journal of Materials Research</i> , 2002, 17, 831-837.	2.6	5
97	Uniformity, composition, and surface tension in solution deposited PbZr _x Ti _{1-x} O ₃ films. <i>Journal of Materials Research</i> , 2007, 22, 103-112.	2.6	5
98	Surface Composition and Imprint in CSD-Based PZT Films. <i>Journal of the American Ceramic Society</i> , 2007, 90, 070922001308007-???	3.8	5
99	Rapid thermal processing of electrospun PbZr _{0.52} Ti _{0.48} O ₃ nanofibers. <i>Thermochimica Acta</i> , 2015, 605, 107-114.	2.7	5
100	Stickstoffbasierte Kraftstoffe: eine "Power-to-Fuel"-Power-to-Gas-Analyse. <i>Angewandte Chemie</i> , 2016, 128, 8942-8949.	2.0	5
101	Auto ignition of a nitrogen-based monofuel as a function of pressure and concentration. <i>Fuel</i> , 2016, 181, 765-771.	6.4	5
102	Critical Current Densities in Thin Ceramic Tapes of Superconducting Ba ₂ YCu ₃ O ₇ . <i>Journal of the American Ceramic Society</i> , 1988, 71, C-291-C-293.	3.8	4
103	Preparation of alumina aerogel films by low temperature CO ₂ supercritical drying process. <i>Journal of Sol-Gel Science and Technology</i> , 1997, 8, 825-829.	2.4	4
104	Transformation of Organosilicon-Loaded Alumina Gel to Homogeneous Alumino-silicates: A Solid-State NMR Study. <i>Chemistry of Materials</i> , 2001, 13, 247-249.	6.7	4
105	Mesoporous K/Fe-Al-O nanofibers by electrospinning of solution precursors. <i>Journal of Materials Research</i> , 2015, 30, 3142-3150.	2.6	4
106	New electrolyzer principles: decoupled water splitting., 2022, , 407-454.		4
107	Comparison of n-Pentane Reforming Over Pt Supported on Amorphous and Î ³ -Al ₂ O ₃ . <i>Catalysis Letters</i> , 2003, 89, 169-178.	2.6	3
108	The variety of T _c values of the 1:2:3 superconductors (Ca _x La _{1-x})(La _{0.25+x} Ba _{1.75-x})Cu ₃ O _y having the same overall compositions (x,y). <i>Superconductor Science and Technology</i> , 2004, 17, 1389-1394.	3.5	3

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109	Preparation of uncladded YBCO wires. Physica C: Superconductivity and Its Applications, 1993, 209, 273-276.	1.2	2
110	High-Temperature Corrosion of Stainless Steels and Ni Alloys During Combustion of Urea Ammonium Nitrate (UAN) Fuel. Oxidation of Metals, 2017, 87, 39-56.	2.1	2
111	Thermal Autoignition of Aqueous Urea Ammonium Nitrate as a Function of Equivalence Ratio, Water Content, and Nitrogen Pressure. Energy Technology, 2018, 6, 540-546.	3.8	2
112	Tl-Based Superconducting Films by Sputtering Using a Single Target. , 1989, , 229-236.		2
113	Magnetization Measurements of 5 μ m Ba _{0.6} K _{0.4} BiO ₃ Crystals: Approach to Intrinsic Behavior with Decreasing Size. Materials Research Society Symposia Proceedings, 1989, 169, 1081.	0.1	1
114	Forming methods for high T _c superconductors. Thermochemica Acta, 1991, 174, 239-251.	2.7	1
115	Effect of eutectic additions and sintering temperature on the microstructure, density and critical current of oxalate derived YBCO. Applied Superconductivity, 1995, 3, 229-235.	0.5	1
116	Temperature effect on nonhydrolytic foaming process. Journal of Materials Research, 1999, 14, 4020-4024.	2.6	1
117	Entrapment of organosilicon molecules in nonhydrolytic alumina gels and thermal behavior of the resulting composite. Journal of Materials Research, 2001, 16, 1413-1419.	2.6	1
118	Deposition of inorganic bronze coatings over ceramic foams. Journal of Materials Research, 2005, 20, 1207-1215.	2.6	1
119	Effect of pressure on the combustion of an aqueous urea and ammonium nitrate monofuel. Proceedings of the Combustion Institute, 2019, 37, 5663-5670.	3.9	1
120	Directional Growth and Oxide Electrodes in CSD-based PZT Films. Applications of Ferroelectrics, IEEE International Symposium on, 2007, , .	0.0	0
121	Pollutant Abatement of Nitrogen-Based Fuel Effluents over Mono- and Bimetallic Pt/Ru Catalysts. ACS Omega, 2017, 2, 8273-8281.	3.5	0
122	Effect of diluent pressure on the auto-ignition kinetics of a low-carbon urea ammonium nitrate monofuel. Energy Procedia, 2017, 142, 716-722.	1.8	0