

Kenneth H Sandhage

List of Publications by Year in descending order

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67
papers

2,989
citations

172457

29
h-index

161849

54
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68
all docs

68
docs citations

68
times ranked

3973
citing authors

#	ARTICLE	IF	CITATIONS
1	Validation of the Porous Medium Approximation for Hydrodynamics Analysis in Compact Heat Exchangers. <i>Journal of Fluids Engineering, Transactions of the ASME</i> , 2022, 144, .	1.5	3
2	Corrosion of Al ₂ O ₃ /Cr and Ti ₂ O ₃ /Cr composites in flowing air and CO ₂ at 750°C. <i>Corrosion Science</i> , 2021, 179, 109115.	6.6	4
3	Corrosion of a dense, co-continuous SiC/Si composite in CO ₂ and synthetic air at 750°C. <i>Journal of Materials Research and Technology</i> , 2021, 15, 4852-4859.	5.8	1
4	Kinetic mechanism of conformal magnesium silicide (Mg ₂ Si) film formation via reaction of Si single crystals with Mg vapor. <i>Journal of Materials Science</i> , 2020, 55, 1107-1116.	3.7	2
5	In situ high-temperature X-ray diffraction analysis of Mg ₂ Si formation kinetics via reaction of Mg films with Si single crystal substrates. <i>Intermetallics</i> , 2018, 94, 200-209.	3.9	5
6	Individually Dispersed Gold Nanoshell-Bearing Cellulose Nanocrystals with Tailorable Plasmon Resonance. <i>Langmuir</i> , 2018, 34, 4427-4436.	3.5	11
7	Containment materials for liquid tin at 1350°C as a heat transfer fluid for high temperature concentrated solar power. <i>Solar Energy</i> , 2018, 164, 47-57.	6.1	20
8	Surface modification of bulk titanium substrates for biomedical applications via low-temperature microwave hydrothermal oxidation. <i>Journal of Biomedical Materials Research - Part A</i> , 2018, 106, 782-796.	4.0	16
9	Tunable multimodal adhesion of 3D, nanocrystalline CoFe ₂ O ₄ pollen replicas. <i>Bioinspiration and Biomimetics</i> , 2017, 12, 066009.	2.9	10
10	A novel, facile, layer-by-layer substrate surface modification for the fabrication of all-inkjet-printed flexible electronic devices on Kapton. <i>Journal of Materials Chemistry C</i> , 2016, 4, 7052-7060.	5.5	23
11	Surface-Enhanced Two-Photon Excitation Fluorescence of Various Fluorophores Evaluated Using a Multiphoton Microscope. <i>Journal of Lightwave Technology</i> , 2015, 33, 3446-3452.	4.6	0
12	Three-dimensional magnetite replicas of pollen particles with tailorable and predictable multimodal adhesion. <i>Journal of Materials Chemistry C</i> , 2015, 3, 632-643.	5.5	17
13	High thermal conductivity of chain-oriented amorphous polythiophene. <i>Nature Nanotechnology</i> , 2014, 9, 384-390.	31.5	327
14	Magnesiothermally Formed Porous Silicon Thin Films on Silicon Insulator Optical Microresonators for High-Sensitivity Detection. <i>Advanced Optical Materials</i> , 2014, 2, 235-239.	7.3	10
15	Conversion of Pollen Particles into Three-Dimensional Ceramic Replicas Tailored for Multimodal Adhesion. <i>Chemistry of Materials</i> , 2013, 25, 4529-4536.	6.7	41
16	Unlocking the Latent Antimicrobial Potential of Biomimetically Synthesized Inorganic Materials. <i>Advanced Functional Materials</i> , 2013, 23, 4236-4245.	14.9	9
17	Inkjet catalyst printing and electroless copper deposition for low-cost patterned microwave passive devices on paper. <i>Electronic Materials Letters</i> , 2013, 9, 669-676.	2.2	51
18	Conversion of porous anodic Al ₂ O ₃ into freestanding, uniformly aligned, multi-wall TiO ₂ nanotube arrays for electrode applications. <i>Journal of Materials Chemistry A</i> , 2013, 1, 128-134.	10.3	6

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19	Rapid Flow-Through Biocatalysis with High Surface Area, Enzyme-Loaded Carbon and Gold-Bearing Diatom Frustule Replicas. <i>Advanced Functional Materials</i> , 2013, 23, 4611-4620.	14.9	32
20	Biomimetics: Unlocking the Latent Antimicrobial Potential of Biomimetically Synthesized Inorganic Materials (<i>Adv. Funct. Mater.</i> 34/2013). <i>Advanced Functional Materials</i> , 2013, 23, 4166-4166.	14.9	0
21	Syntheses of nanostructured Cu- and Ni-based micro-assemblies with selectable 3-D hierarchical biogenic morphologies. <i>Journal of Materials Chemistry</i> , 2012, 22, 1305-1312.	6.7	28
22	Freestanding monolithic silicon aerogels. <i>Journal of Materials Chemistry</i> , 2012, 22, 16196.	6.7	58
23	3D photoluminescent lanthanide-doped barium titanate structures synthesized by coating and shape-preserving reaction of complex-shaped bioorganic templates. <i>Journal of Materials Chemistry</i> , 2012, 22, 10435.	6.7	12
24	Solvent and polymer matrix effects on TIPS-pentacene/polymer blend organic field-effect transistors. <i>Journal of Materials Chemistry</i> , 2012, 22, 5531.	6.7	109
25	Graphene enhanced wireless sensors. , 2012, , .		7
26	Biologically Enabled Syntheses of Freestanding Metallic Structures Possessing Subwavelength Pore Arrays for Extraordinary (Surface Plasmon-Mediated) Infrared Transmission. <i>Advanced Functional Materials</i> , 2012, 22, 2550-2559.	14.9	38
27	Oriented Growth of Al ₂ O ₃ :ZnO Nanolaminates for Use as Electron-Selective Electrodes in Inverted Polymer Solar Cells. <i>Advanced Functional Materials</i> , 2012, 22, 1531-1538.	14.9	47
28	Gold Nanostructures: Biologically-Enabled Syntheses of Freestanding Metallic Structures Possessing Subwavelength Pore Arrays for Extraordinary (Surface Plasmon-Mediated) Infrared Transmission (<i>Adv. Funct. Mater.</i> 12/2012). <i>Advanced Functional Materials</i> , 2012, 22, 2655-2655.	14.9	0
29	Intragranular Tungsten/Zirconium Carbide Nanocomposites via a Selective Liquid/Solid Displacement Reaction. <i>Journal of the American Ceramic Society</i> , 2012, 95, 2769-2772.	3.8	13
30	High surface area, micro/mesoporous carbon particles with selectable 3-D biogenic morphologies for tailored catalysis, filtration, or adsorption. <i>Energy and Environmental Science</i> , 2011, 4, 3980.	30.8	19
31	Roles of thermally-induced vertical phase segregation and crystallization on the photovoltaic performance of bulk heterojunction inverted polymer solar cells. <i>Energy and Environmental Science</i> , 2011, 4, 3456.	30.8	34
32	Protein-Enabled Layer-by-Layer Syntheses of Aligned, Porous-Wall, High-Aspect-Ratio TiO ₂ Nanotube Arrays. <i>Advanced Functional Materials</i> , 2011, 21, 1693-1700.	14.9	24
33	Biocatalytic Nanoscale Coatings Through Biomimetic Layer-by-Layer Mineralization. <i>Advanced Functional Materials</i> , 2011, 21, 4243-4251.	14.9	61
34	Titania Nanotubes: Protein-Enabled Layer-by-Layer Syntheses of Aligned, Porous-Wall, High-Aspect-Ratio TiO ₂ Nanotube Arrays (<i>Adv. Funct. Mater.</i> 9/2011). <i>Advanced Functional Materials</i> , 2011, 21, 1537-1537.	14.9	0
35	Nanomanufacturing: Direct Fabrication of Arbitrary-Shaped Ferroelectric Nanostructures on Plastic, Glass, and Silicon Substrates (<i>Adv. Mater.</i> 33/2011). <i>Advanced Materials</i> , 2011, 23, 3740-3740.	21.0	13
36	Materials "alchemy": Shape-preserving chemical transformation of micro-to-macroscopic 3-D structures. <i>Jom</i> , 2010, 62, 32-43.	1.9	17

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37	Morphology-Preserving Conversion of a 3D Bioorganic Template into a Nanocrystalline Multicomponent Oxide Compound. <i>Angewandte Chemie - International Edition</i> , 2010, 49, 7765-7768.	13.8	19
38	Layer-By-Layer Dendritic Growth of Hyperbranched Thin Films for Surface Sol-Gel Syntheses of Conformal, Functional, Nanocrystalline Oxide Coatings on Complex 3D (Bio)silica Templates. <i>Advanced Functional Materials</i> , 2009, 19, 2768-2776.	14.9	55
39	Syntheses of Porous Self-Supporting Metal-Nanoparticle Assemblies with 3D Morphologies Inherited from Biosilica Templates (Diatom Frustules). <i>Advanced Materials</i> , 2009, 21, 474-478.	21.0	96
40	The kinetics of incongruent reduction of tungsten carbide via reaction with a hafnium-copper melt. <i>Acta Materialia</i> , 2009, 57, 3924-3931.	7.9	12
41	Protein-Mediated Layer-by-Layer Syntheses of Freestanding Microscale Titania Structures with Biologically Assembled 3-D Morphologies. <i>Chemistry of Materials</i> , 2009, 21, 5704-5710.	6.7	62
42	3D Rutile Titania-Based Structures with Morpho Butterfly Wing Scale Morphologies. <i>Angewandte Chemie - International Edition</i> , 2008, 47, 7921-7923.	13.8	91
43	Identification of peptides capable of inducing the formation of titania but not silica via a subtractive bacteriophage display approach. <i>Journal of Materials Chemistry</i> , 2008, 18, 3871.	6.7	35
44	Reactive conversion of polycrystalline SnO ₂ into single-crystal nanofiber arrays at low oxygen partial pressure. <i>Journal of Materials Research</i> , 2008, 23, 2639-2644.	2.6	8
45	Enhanced hydrothermal conversion of surfactant-modified diatom microshells into barium titanate replicas. <i>Journal of Materials Research</i> , 2007, 22, 1121-1127.	2.6	13
46	Thin, Conformal, and Continuous SnO ₂ Coatings on Three-Dimensional Biosilica Templates through Hydroxy-Group Amplification and Layer-By-Layer Alkoxide Deposition. <i>Angewandte Chemie - International Edition</i> , 2007, 46, 5724-5727.	13.8	68
47	Chemical reduction of three-dimensional silica micro-assemblies into microporous silicon replicas. <i>Nature</i> , 2007, 446, 172-175.	27.8	727
48	Rapid Hydrolysis of Organophosphorous Esters Induced by Nanostructured, Fluorine-Doped Titania Replicas of Diatom Frustules. <i>Journal of the American Ceramic Society</i> , 2007, 90, 1632-1636.	3.8	47
49	Manganese-Doped Zinc Orthosilicate-Bearing Phosphor Microparticles with Controlled Three-Dimensional Shapes Derived from Diatom Frustules. <i>Journal of the American Ceramic Society</i> , 2007, 90, 1304-1308.	3.8	25
50	Kinetic mechanism of TiO ₂ nanocarving via reaction with hydrogen gas. <i>Journal of Materials Research</i> , 2006, 21, 1822-1829.	2.6	15
51	Three-Dimensional Assemblies of Zirconia Nanocrystals Via Shape-Preserving Reactive Conversion of Diatom Microshells. <i>Journal of the American Ceramic Society</i> , 2006, 89, 694-698.	3.8	42
52	Phosphor Microparticles of Controlled Three-Dimensional Shape from Phytoplankton. <i>Journal of the Electrochemical Society</i> , 2006, 153, H34.	2.9	24
53	Template Routes to Non-Oxide Ceramic Nano- and Micro-Structures. <i>Materials Research Society Symposia Proceedings</i> , 2006, 921, 1.	0.1	0
54	Three-Dimensional Magnesia-Based Nanocrystal Assemblies Via Low-Temperature Magnesiothermic Reaction of Diatom Microshells. <i>Journal of the American Ceramic Society</i> , 2005, 88, 2005-2010.	3.8	66

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55	Merging Biological Self-Assembly with Synthetic Chemical Tailoring: The Potential for 3-D Genetically Engineered Micro/Nano-Devices (3-D GEMS). International Journal of Applied Ceramic Technology, 2005, 2, 317-326.	2.1	67
56	Zn ₂ SiO ₄ -coated microparticles with biologically-controlled 3D shapes. Physica Status Solidi A, 2005, 202, R105-R107.	1.7	30
57	Free-standing microscale structures of nanocrystalline zirconia with biologically replicable three-dimensional shapes. Journal of Materials Research, 2005, 20, 282-287.	2.6	46
58	Perovskite Particles from Phytoplankton. Materials Research Society Symposia Proceedings, 2005, 873, 1.	0.1	0
59	Sol-gel synthesis on self-replicating single-cell scaffolds: applying complex chemistries to nature's 3-D nanostructured templates. Chemical Communications, 2005, , 651.	4.1	60
60	Anatase assemblies from algae: coupling biological self-assembly of 3-D nanoparticle structures with synthetic reaction chemistry. Chemical Communications, 2004, , 796.	4.1	67
61	Freestanding microscale 3D polymeric structures with biologically-derived shapes and nanoscale features. Journal of Materials Research, 2004, 19, 2541-2545.	2.6	42
62	Indirect Dissolution of (Al, Cr) ₂ O ₃ in CaO-MgO-Al ₂ O ₃ -SiO ₂ (CMAS) Melts. Journal of the American Ceramic Society, 1991, 74, 1941-1954.	3.8	27
63	Direct and Indirect Dissolution of Sapphire in Calcia-Magnesia-Alumina-Silica Melts: Dissolution Kinetics. Journal of the American Ceramic Society, 1990, 73, 3633-3642.	3.8	63
64	Indirect Dissolution of Sapphire into Calcia-Magnesia-Alumina-Silica Melts: Electron Microprobe Analysis of the Dissolution Process. Journal of the American Ceramic Society, 1990, 73, 3643-3649.	3.8	48
65	Indirect Dissolution of Sapphire into Silicate Melts. Journal of the American Ceramic Society, 1988, 71, 478-489.	3.8	62
66	Sequence Specific Morphological Control Over the Formation of Germanium Oxide During Peptide Mediated Synthesis. Ceramic Engineering and Science Proceedings, 0, , 25-32.	0.1	1
67	3-D Microparticles of BaTiO ₃ and Zn ₂ SiO ₄ Via the Chemical (Sol-Gel, Acetate, or Hydrothermal) Conversion of Biological (Diatom) Templates. Ceramic Engineering and Science Proceedings, 0, , 49-56.	0.1	3