

Anthony J Kenyon

List of Publications by Year in Descending Order

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

135
papers

4,438
citations

33
h-index

64
g-index

156
ext. papers

5,112
ext. citations

5.1
avg, IF

5.73
L-index

#	Paper	IF	Citations
135	Probing Electrochemistry at the Nanoscale: In Situ TEM and STM Characterizations of Conducting Filaments in Memristive Devices. <i>Kluwer International Series in Electronic Materials: Science and Technology</i> , 2022 , 87-120		
134	Brain-inspired computing needs a master plan.. <i>Nature</i> , 2022 , 604, 255-260	50.4	19
133	Nonideality-Aware Training for Accurate and Robust Low-Power Memristive Neural Networks.. <i>Advanced Science</i> , 2022 , e2105784	13.6	4
132	Standards for the Characterization of Endurance in Resistive Switching Devices. <i>ACS Nano</i> , 2021 ,	16.7	36
131	A nanoscale analysis method to reveal oxygen exchange between environment, oxide, and electrodes in ReRAM devices. <i>APL Materials</i> , 2021 , 9, 111109	5.7	1
130	Substitutional Tin Acceptor States in Black Phosphorus. <i>Journal of Physical Chemistry C</i> , 2021 , 125, 22883-22889	3.2	3
129	The nature of column boundaries in micro-structured silicon oxide nanolayers. <i>APL Materials</i> , 2021 , 9, 121107	5.7	1
128	Complementary Metal-Oxide Semiconductor and Memristive Hardware for Neuromorphic Computing. <i>Advanced Intelligent Systems</i> , 2020 , 2, 1900189	6	39
127	Memristors From In-Memory Computing, Deep Learning Acceleration, and Spiking Neural Networks to the Future of Neuromorphic and Bio-Inspired Computing. <i>Advanced Intelligent Systems</i> , 2020 , 2, 2000085	6	47
126	Committee machines-a universal method to deal with non-idealities in memristor-based neural networks. <i>Nature Communications</i> , 2020 , 11, 4273	17.4	20
125	Improving the Consistency of Nanoscale Etching for Atomic Force Microscopy Tomography Applications. <i>Frontiers in Materials</i> , 2019 , 6,	4	2
124	Synaptic and neuromorphic functions: general discussion. <i>Faraday Discussions</i> , 2019 , 213, 553-578	3.6	1
123	Electrochemical metallization ReRAMs (ECM) - Experiments and modelling: general discussion. <i>Faraday Discussions</i> , 2019 , 213, 115-150	3.6	4
122	An oxygen vacancy mediated Ag reduction and nucleation mechanism in SiO ₂ RRAM devices. <i>Microelectronics Reliability</i> , 2019 , 98, 144-152	1.2	10
121	Sensing and Discrimination of Explosives at Variable Concentrations with a Large-Pore MOF as Part of a Luminescent Array. <i>ACS Applied Materials & Interfaces</i> , 2019 , 11, 11618-11626	9.5	35
120	Memristor-Based Edge Detection for Spike Encoded Pixels. <i>Frontiers in Neuroscience</i> , 2019 , 13, 1386	5.1	6
119	The interplay between structure and function in redox-based resistance switching. <i>Faraday Discussions</i> , 2019 , 213, 151-163	3.6	8

118	Simulation of Inference Accuracy Using Realistic RRAM Devices. <i>Frontiers in Neuroscience</i> , 2019 , 13, 593	5.1	33
117	Recommended Methods to Study Resistive Switching Devices. <i>Advanced Electronic Materials</i> , 2019 , 5, 1800143	6.4	297
116	. <i>IEEE Nanotechnology Magazine</i> , 2018 , 17, 884-888	2.6	8
115	Controlling and modelling the wetting properties of III-V semiconductor surfaces using re-entrant nanostructures. <i>Scientific Reports</i> , 2018 , 8, 3544	4.9	2
114	Investigation of resistance switching in SiO RRAM cells using a 3D multi-scale kinetic Monte Carlo simulator. <i>Journal of Physics Condensed Matter</i> , 2018 , 30, 084005	1.8	16
113	Spike-Timing Dependent Plasticity in Unipolar Silicon Oxide RRAM Devices. <i>Frontiers in Neuroscience</i> , 2018 , 12, 57	5.1	15
112	On the Limits of Scalpel AFM for the 3D Electrical Characterization of Nanomaterials. <i>Advanced Functional Materials</i> , 2018 , 28, 1802266	15.6	14
111	Simulation of Cycle-to-Cycle Instabilities in SiO $_{x}$ -Based ReRAM Devices Using a Self-Correlated Process With Long-Term Variation. <i>IEEE Electron Device Letters</i> , 2018 , 1-1	4.4	5
110	Theoretical Study of Ag Interactions in Amorphous Silica RRAM Devices 2018 ,		1
109	Silicon Oxide (SiO): A Promising Material for Resistance Switching?. <i>Advanced Materials</i> , 2018 , 30, e1801187	11.7	105
108	On the ability of Fester resonance energy transfer to enhance luminescent solar concentrator efficiency. <i>Nano Energy</i> , 2017 , 32, 263-270	17.1	45
107	Probing electrochemistry at the nanoscale: in situ TEM and STM characterizations of conducting filaments in memristive devices. <i>Journal of Electroceramics</i> , 2017 , 39, 73-93	1.5	22
106	Intrinsic resistance switching in amorphous silicon oxide for high performance SiO _x ReRAM devices. <i>Microelectronic Engineering</i> , 2017 , 178, 98-103	2.5	45
105	Intrinsic Resistance Switching in Amorphous Silicon Suboxides: The Role of Columnar Microstructure. <i>Scientific Reports</i> , 2017 , 7, 9274	4.9	31
104	Light-activated resistance switching in SiO _x RRAM devices. <i>Applied Physics Letters</i> , 2017 , 111, 233502	3.4	34
103	Advanced physical modeling of SiO _x resistive random access memories 2016 ,		4
102	Electrospray synthesis and properties of hierarchically structured PLGA TIPS microspheres for use as controlled release technologies. <i>Journal of Colloid and Interface Science</i> , 2016 , 467, 220-229	9.3	38
101	Flexible and fluorophore-doped luminescent solar concentrators based on polydimethylsiloxane. <i>Optics Letters</i> , 2016 , 41, 713-6	3	21

100	Nanosecond Analog Programming of Substoichiometric Silicon Oxide Resistive RAM. <i>IEEE Nanotechnology Magazine</i> , 2016 , 15, 428-434	2.6	11
99	Losses in luminescent solar concentrators unveiled. <i>Solar Energy Materials and Solar Cells</i> , 2016 , 144, 40-47	6.4	61
98	Emulating the Electrical Activity of the Neuron Using a Silicon Oxide RRAM Cell. <i>Frontiers in Neuroscience</i> , 2016 , 10, 57	5.1	77
97	Nanoscale Transformations in Metastable, Amorphous, Silicon-Rich Silica. <i>Advanced Materials</i> , 2016 , 28, 7486-93	24	43
96	In situ transmission electron microscopy of resistive switching in thin silicon oxide layers. <i>Resolution and Discovery</i> , 2016 , 1, 27-33	0.9	9
95	Silica: Nanoscale Transformations in Metastable, Amorphous, Silicon-Rich Silica (Adv. Mater. 34/2016). <i>Advanced Materials</i> , 2016 , 28, 7549-7549	24	9
94	Conductive AFM Topography of Intrinsic Conductivity Variations in Silica Based Dielectrics for Memory Applications. <i>ECS Transactions</i> , 2016 , 75, 3-9	1	5
93	X-ray spectromicroscopy investigation of soft and hard breakdown in RRAM devices. <i>Nanotechnology</i> , 2016 , 27, 345705	3.4	8
92	Design and Fabrication of Suspended Indium Phosphide Waveguides for MEMS-Actuated Optical Buffering. <i>IEEE Journal of Selected Topics in Quantum Electronics</i> , 2015 , 21, 240-246	3.8	2
91	Conductance tomography of conductive filaments in intrinsic silicon-rich silica RRAM. <i>Nanoscale</i> , 2015 , 7, 18030-5	7.7	51
90	Doping Group IIB Metal Ions into Quantum Dot Shells via the One-Pot Decomposition of Metal-Dithiocarbamates. <i>Advanced Optical Materials</i> , 2015 , 3, 704-712	8.1	18
89	Modeling of Quantized Conductance Effects in Electrochemical Metallization Cells. <i>IEEE Nanotechnology Magazine</i> , 2015 , 14, 505-512	2.6	30
88	Structural changes and conductance thresholds in metal-free intrinsic SiO _x resistive random access memory. <i>Journal of Applied Physics</i> , 2015 , 117, 124505	2.5	69
87	Resistive Switching in Oxides. <i>Springer Series in Surface Sciences</i> , 2015 , 401-428	0.4	12
86	The vapour phase detection of explosive markers and derivatives using two fluorescent metal-organic frameworks. <i>Journal of Materials Chemistry A</i> , 2015 , 3, 6351-6359	13	63
85	Microscopic and spectroscopic analysis of the nature of conductivity changes during resistive switching in silicon-rich silicon oxide. <i>Physica Status Solidi C: Current Topics in Solid State Physics</i> , 2015 , 12, 211-217		16
84	Multiple Diode-Like Conduction in Resistive Switching SiO _x -Based MIM Devices. <i>IEEE Nanotechnology Magazine</i> , 2015 , 14, 15-17	2.6	7
83	The interaction of gold and silver nanoparticles with a range of anionic and cationic dyes. <i>Physical Chemistry Chemical Physics</i> , 2014 , 16, 6050-9	3.6	25

82	Homeotropic alignment and Förster resonance energy transfer: The way to a brighter luminescent solar concentrator. <i>Journal of Applied Physics</i> , 2014 , 116, 173103	2.5	25
81	MEMS actuation for a continuously tunable optical buffer 2014 ,		1
80	Design and fabrication of InP free-standing optical waveguides for MEMS 2014 ,		1
79	Modification of erbium photoluminescence decay rate due to ITO layers on thin films of SiO ₂ :Er doped with Si-nanoclusters. <i>Journal of Luminescence</i> , 2013 , 136, 407-410	3.8	7
78	Donor ionization in size controlled silicon nanocrystals: The transition from defect passivation to free electron generation. <i>Journal of Applied Physics</i> , 2013 , 113, 024304	2.5	10
77	Size limit on the phosphorous doped silicon nanocrystals for dopant activation. <i>Nuclear Instruments & Methods in Physics Research B</i> , 2013 , 307, 456-458	1.2	5
76	Time-correlated single-photon counting study of multiple photoluminescence lifetime components of silicon nanoclusters. <i>Journal of Luminescence</i> , 2013 , 136, 57-62	3.8	4
75	Self-assembly of metallic nanoparticles into one dimensional arrays. <i>Journal of Materials Chemistry A</i> , 2013 , 1, 6985	13	49
74	Efficiency and loss mechanisms of plasmonic Luminescent Solar Concentrators. <i>Optics Express</i> , 2013 , 21 Suppl 5, A735-49	3.3	22
73	Multi-channel conduction in redox-based resistive switch modelled using quantum point contact theory. <i>Applied Physics Letters</i> , 2013 , 103, 222904	3.4	13
72	Quantum conductance in silicon oxide resistive memory devices. <i>Scientific Reports</i> , 2013 , 3, 2708	4.9	126
71	Investigation of quartz grain surface textures by atomic force microscopy for forensic analysis. <i>Forensic Science International</i> , 2012 , 223, 245-55	2.6	17
70	Continuous hydrothermal synthesis of surface-functionalised nanophosphors for biological imaging. <i>RSC Advances</i> , 2012 , 2, 10037	3.7	10
69	Resistive switching in silicon suboxide films. <i>Journal of Applied Physics</i> , 2012 , 111, 074507	2.5	173
68	Electrically tailored resistance switching in silicon oxide. <i>Nanotechnology</i> , 2012 , 23, 455201	3.4	84
67	Rate equation modelling of erbium luminescence dynamics in erbium-doped silicon-rich-silicon-oxide. <i>Journal of Luminescence</i> , 2012 , 132, 3103-3112	3.8	6
66	Self-assembled ultra-high aspect ratio silver nanochains. <i>Advanced Materials</i> , 2012 , 24, 5227-35	24	15
65	Intrinsic Resistive Switching in Bulk SiO _x Films. <i>Materials Research Society Symposia Proceedings</i> , 2012 , 1430, 1		

64	Structural factors impacting carrier transport and electroluminescence from Si nanocluster-sensitized Er ions. <i>Optics Express</i> , 2012 , 20, 22490-502	3.3	12
63	Electrically pumped silicon waveguide light sources. <i>Optics Express</i> , 2011 , 19, 24569-76	3.3	5
62	Probing the phonon confinement in ultrasmall silicon nanocrystals reveals a size-dependent surface energy. <i>Journal of Applied Physics</i> , 2011 , 109, 083534	2.5	42
61	Probing energy transfer in an ensemble of silicon nanocrystals. <i>Journal of Applied Physics</i> , 2011 , 110, 033522	2.5	13
60	(Invited) Novel Processing for Si-Nanocrystal Based Photonic Materials. <i>ECS Transactions</i> , 2010 , 28, 3-13	1	
59	Towards population inversion of electrically pumped Er ions sensitized by Si nanoclusters. <i>Optics Express</i> , 2010 , 18, 2230-5	3.3	69
58	Introducing scenario based learning: Experiences from an undergraduate electronic and electrical engineering course 2010 ,		5
57	Current transport and electroluminescence mechanisms in thin SiO ₂ films containing Si nanocluster-sensitized erbium ions. <i>Journal of Applied Physics</i> , 2009 , 106, 063526	2.5	39
56	. <i>IEEE Transactions on Electron Devices</i> , 2009 , 56, 692-695	2.9	3
55	Time-resolved measurements of dislocation-related photoluminescence bands in silicon. <i>Physica Status Solidi C: Current Topics in Solid State Physics</i> , 2009 , 6, 1811-1816		1
54	Modification of the Er ³⁺ radiative lifetime from proximity to silicon nanoclusters in silicon-rich silicon oxide. <i>Optics Express</i> , 2009 , 17, 906-11	3.3	13
53	Time-resolved measurements of dislocation-related photoluminescence bands in silicon. <i>Semiconductor Science and Technology</i> , 2008 , 23, 025010	1.8	4
52	Generalized rate-equation analysis of excitation exchange between silicon nanoclusters and erbium ions. <i>Physical Review B</i> , 2008 , 77,	3.3	23
51	Silicon nanocluster-sensitized emission from erbium: The role of stress in the formation of silicon nanoclusters. <i>Journal of Applied Physics</i> , 2008 , 104, 123108	2.5	3
50	Silicon nanoclusters containing nitrogen and sensitization of erbium luminescence in SiO _x :Er. <i>Materials Science and Engineering B: Solid-State Materials for Advanced Technology</i> , 2008 , 146, 175-178	3.1	2
49	Retention of data in heat-damaged SIM cards and potential recovery methods. <i>Forensic Science International</i> , 2008 , 177, 42-6	2.6	4
48	Process harmonic pulling in RIE plasma-tool. <i>Electronics Letters</i> , 2006 , 42, 120	1.1	3
47	Er ³⁺ excited state absorption and the low fraction of nanocluster-excitable Er ³⁺ in SiO _x . <i>Applied Physics Letters</i> , 2006 , 89, 031116	3.4	31

46	Excited state absorption in the Si nanocluster-Er material system. <i>IEEE Photonics Technology Letters</i> , 2006 , 18, 289-291	2.2	10
45	Sensitisation of erbium luminescence in erbium-implanted alumina. <i>Optical Materials</i> , 2006 , 28, 655-659	3.3	2
44	An analysis of erbium excited state absorption in silicon-rich silica. <i>Journal of Luminescence</i> , 2006 , 121, 193-198	3.8	14
43	Erbium in silicon. <i>Semiconductor Science and Technology</i> , 2005 , 20, R65-R84	1.8	199
42	Amorphous and nanocrystalline luminescent Si and Ge obtained via a solid-state chemical metathesis synthesis route. <i>Journal of Solid State Chemistry</i> , 2005 , 178, 937-949	3.3	50
41	ER Not for Lazy Students like Me R <i>International Journal of Electrical Engineering and Education</i> , 2005 , 42, 41-51	0.6	6
40	A frequency domain measurement diagnostic technique for plasma-tools. <i>Measurement Science and Technology</i> , 2004 , 15, 231-236	2	6
39	Broadband sensitization of 1.53 μ m Er ³⁺ luminescence in erbium-implanted alumina. <i>Applied Physics Letters</i> , 2004 , 85, 5200-5202	3.4	9
38	Harmonic monitoring of the switched silicon etched process. <i>Journal Physics D: Applied Physics</i> , 2003 , 36, 2146-2151	3	1
37	The origin of the 0.78 eV luminescence band in dislocated silicon. <i>Journal of Physics Condensed Matter</i> , 2003 , 15, S2843-S2850	1.8	21
36	A Silicon-Based Infra-Red Photodetector Exploiting Erbium-Doped Silicon Nanocrystals. <i>Materials Research Society Symposia Proceedings</i> , 2003 , 770, 6111		
35	Increasing the efficiency of erbium-based sources using silicon quantum dots. <i>Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences</i> , 2003 , 361, 345-61; discussion 361 ³²		7
34	The Origin Of The 0.78 eV Luminescence Band In Strained Layer SiGe/Si. <i>Materials Research Society Symposia Proceedings</i> , 2003 , 770, 511		
33	FTIR and XPS investigation of Er-doped SiO ₂ /TiO ₂ films. <i>Materials Science and Engineering B: Solid-State Materials for Advanced Technology</i> , 2003 , 105, 209-213	3.1	60
32	The infra-red photoresponse of erbium-doped silicon nanocrystals. <i>Materials Science and Engineering B: Solid-State Materials for Advanced Technology</i> , 2003 , 105, 230-235	3.1	3
31	Visible photoluminescence from nanocrystalline Ge grown at room temperature by photo-oxidation of SiGe using a 126 nm lamp. <i>Applied Surface Science</i> , 2003 , 208-209, 364-368	6.7	6
30	Quantum confinement in rare-earth doped semiconductor systems. <i>Current Opinion in Solid State and Materials Science</i> , 2003 , 7, 143-149	12	26
29	Recent developments in rare-earth doped materials for optoelectronics. <i>Progress in Quantum Electronics</i> , 2002 , 26, 225-284	9.1	679

28	Luminescence from erbium-doped silicon nanocrystals in silica: Excitation mechanisms. <i>Journal of Applied Physics</i> , 2002 , 91, 367	2.5	145
27	Enhancement of Er emission by coupling to silicon nanoclusters: a route to flashlamp-pumped Er amplifiers? 2001 ,		2
26	Investigation of energy exchange between silicon nanocrystals and Er ³⁺ in silica. <i>Materials Science and Engineering B: Solid-State Materials for Advanced Technology</i> , 2001 , 81, 16-18	3.1	5
25	Broad-band and flashlamp pumping of 1.53 μm emission from erbium-doped silicon nanocrystals. <i>Materials Science and Engineering B: Solid-State Materials for Advanced Technology</i> , 2001 , 81, 19-22	3.1	7
24	Flashlamp pumping of erbium-doped silicon nanoclusters. <i>Applied Organometallic Chemistry</i> , 2001 , 15, 352-358	3.1	1
23	Rf probe technology for the next generation of technological plasmas. <i>Journal Physics D: Applied Physics</i> , 2001 , 34, 2726-2733	3	11
22	Remote-coupled sensing of plasma harmonics and process end-point detection. <i>Vacuum</i> , 2000 , 57, 351-364	3.4	14
21	Indirect excitation of 1.5 μm emission from Er ³⁺ in silicon-rich silica. <i>Applied Physics Letters</i> , 2000 , 76, 688-690	3.4	14
20	Evidence of energy coupling between Si nanocrystals and Er ³⁺ in ion-implanted silica thin films. <i>Applied Physics Letters</i> , 1999 , 75, 2011-2013	3.4	119
19	A noninvasive rf probe for the study of ionization and dissociation processes in technological plasmas. <i>Journal of Applied Physics</i> , 1999 , 86, 4100-4106	2.5	6
18	Investigation of Coupling Mechanism between Erbium (Er ³⁺) and Ytterbium (Yb ³⁺) in Alumina (Al ₂ O ₃) Host. <i>Materials Research Society Symposia Proceedings</i> , 1999 , 560, 203		
17	The Effect of Level Mixing in Er-Doped Si. <i>Materials Research Society Symposia Proceedings</i> , 1999 , 560, 251		
16	Energy Transfer in Erbium-Doped Silicon Nanoclusters: A Comparison of Silicon-Rich Silica and Silicon Nanopowders. <i>Materials Research Society Symposia Proceedings</i> , 1999 , 560, 221		
15	Modeling the contribution of quantum confinement to luminescence from silicon nanoclusters. <i>Journal of Applied Physics</i> , 1998 , 83, 3789-3794	2.5	167
14	Luminescence efficiency measurements of silicon nanoclusters. <i>Applied Physics Letters</i> , 1998 , 73, 523-525	3.4	22
13	DC electroluminescence from PECVD grown thin films of silicon-rich silica. <i>Electronics Letters</i> , 1996 , 32, 1703	1.1	10
12	The origin of photoluminescence from thin films of silicon-rich silica. <i>Journal of Applied Physics</i> , 1996 , 79, 9291-9300	2.5	185
11	Silicon Nanoclusters in Silica: A Luminescence Study of Visible Light Emission from a Siliconbased Material. <i>Materials Research Society Symposia Proceedings</i> , 1996 , 424, 483		

10	Non-Destructive Assessment Of Semiconductor Carrier Lifetime Using Photothermal Radiometry. <i>Materials Research Society Symposia Proceedings</i> , 1996 , 428, 455		1
9	Thermo-acoustic effects on images for high resolution scanning acoustic microscopy. <i>Electronics Letters</i> , 1994 , 30, 127-128	1.1	
8	Optical properties of PECVD erbium-doped silicon-rich silica: evidence for energy transfer between silicon microclusters and erbium ions. <i>Journal of Physics Condensed Matter</i> , 1994 , 6, L319-L324	1.8	195
7	. <i>IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control</i> , 1994 , 41, 565-568	3.2	2
6	Rare-Earth Doped Silicon-Rich Silica: Evidence for Energy Transfer between Silicon Microclusters and Rare-Earth Ions. <i>Materials Research Society Symposia Proceedings</i> , 1994 , 358, 117		3
5	Dynamics of the gas/liquid interface from laser molecular beam scattering. <i>Faraday Discussions</i> , 1993 , 96, 245	3.6	16
4	Investigation of dynamical processes at liquid surfaces by molecular scattering. <i>Journal of the Chemical Society, Faraday Transactions</i> , 1993 , 89, 3877		26
3	Liquid surface dynamics: a quantum-resolved scattering study. <i>Chemical Physics Letters</i> , 1992 , 190, 55-58.	2.5	27
2	A study of molecular dynamics within liquid flows using fluorescence depolarization. <i>Molecular Physics</i> , 1991 , 74, 871-884	1.7	13
1	Fluorescence depolarization as a probe of molecular dynamics within liquid jets. <i>Molecular Physics</i> , 1991 , 72, 965-970	1.7	14