Adam M Schwartzberg

List of Publications by Year
in descending order

113 papers	7,066 citations	61984 43 h-index	58581 82 g-index
119 all docs	119 docs citations	119 times ranked	12228 citing authors

#	Article	IF	Citations
1	Fabrication of ultrathin suspended membranes from atomic layer deposition films. Journal of Vacuum Science and Technology B:Nanotechnology and Microelectronics, 2022, 40, 023001.	1.2	3
2	Picoseconds-Limited Exciton Recombination in Metalâ€“Organic Chalcogenides Hybrid Quantum Wells. ACS Nano, 2022, 16, 3715-3722.	14.6	9
3	Scalable single-mode surface-emitting laser via open-Dirac singularities. Nature, 2022, 608, 692-698.	27.8	45
4	Anisotropic 2D excitons unveiled in organicâ€“inorganic quantum wells. Materials Horizons, 2021, 8, 197-208.	12.2	17
5	Uncovering the Role of Hole Traps in Promoting Hole Transfer from Multiexcitonic Quantum Dots to Molecular Acceptors. ACS Nano, 2021, 15, 2281-2291.	14.6	21
6	Source noise suppression in attosecond transient absorption spectroscopy by edge-pixel referencing. Optics Express, 2021, 29, 951.	3.4	14
7	Methods for tuning plasmonic and photonic optical resonances in high surface area porous electrodes. Scientific Reports, 2021, 11, 7656.	3.3	2
8	The role of chalcogen vacancies for atomic defect emission in MoS2. Nature Communications, 2021, 12, 3822.	12.8	94
9	Coupled valence carrier and core-exciton dynamics in <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:msub><mml:mi mathvariant="normal">WS</mml:mi><mml:mn>2</mml:mn></mml:msub></mml:math> probed by few-femtosecond extreme ultraviolet transient absorption spectroscopy. Physical Review B, 2021, 104, .	3.2	13
10	Elucidating the local atomic and electronic structure of amorphous oxidized superconducting niobium films. Applied Physics Letters, 2021, 119, .	3.3	10
11	Probing the Mechanisms of Strong Fluorescence Enhancement in Plasmonic Nanogaps with Sub-nanometer Precision. ACS Nano, 2020, 14, 14769-14778.	14.6	33
12	Characterizing transition-metal dichalcogenide thin-films using hyperspectral imaging and machine learning. Scientific Reports, 2020, 10, 11602.	3.3	2
13	Shape-Selective Synthesis of Pentacene Macrocycles and the Effect of Geometry on Singlet Fission. Journal of the American Chemical Society, 2020, 142, 19850-19855.	13.7	20
14	Improved Stability and Exciton Diffusion of Selfâ€Assembled 2D Lattices of Inorganic Perovskite Nanocrystals by Atomic Layer Deposition. Advanced Optical Materials, 2020, 8, 2000900.	7.3	6
15	Ultrathin Free-Standing Oxide Membranes for Electron and Photon Spectroscopy Studies of Solidâ€“Gas and Solidâ€“Liquid Interfaces. Nano Letters, 2020, 20, 6364-6371.	9.1	24
16	Selectively accessing the hotspots of optical nanoantennas by self-aligned dry laser ablation. Nanoscale, 2020, 12, 19170-19177.	5.6	2
17	Electrically driven photon emission from individual atomic defects in monolayer WS ₂. Science Advances, 2020, 6, .	10.3	53
18	Long-Range Exciton Diffusion in Two-Dimensional Assemblies of Cesium Lead Bromide Perovskite Nanocrystals. ACS Nano, 2020, 14, 6999-7007.	14.6	57

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19	Giant defect emission enhancement from ZnO nanowires through desulfurization process. Scientific Reports, 2020, 10, 4237.	3.3	18
20	How Substitutional Point Defects in Two-Dimensional WS₂ Induce Charge Localization, Spinâ€“Orbit Splitting, and Strain. ACS Nano, 2019, 13, 10520-10534.	14.6	86
21	Large Spin-Orbit Splitting of Deep In-Gap Defect States of Engineered Sulfur Vacancies in Monolayer <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:msub><mml:mrow><mml:mi>WS</mml:mi></mml:mrow><mml:mrow><mml:mn>2</mml:mn></mml:mrow> Physical Review Letters, 2019, 123, 076801.	7.8	120
22	Identifying substitutional oxygen as a prolific point defect in monolayer transition metal dichalcogenides. Nature Communications, 2019, 10, 3382.	12.8	196
23	Lithographically defined synthesis of transition metal dichalcogenides. 2D Materials, 2019, 6, 045055.	4.4	4
24	Balancing ion parameters and fluorocarbon chemical reactants for SiO2 pattern transfer control using fluorocarbon-based atomic layer etching. Journal of Vacuum Science and Technology B:Nanotechnology and Microelectronics, 2019, 37, .	1.2	5
25	A nanochannel through a plasmonic antenna gap: an integrated device for single particle counting. Lab on A Chip, 2019, 19, 2394-2403.	6.0	22
26	Perovskite nanowireâ€“block copolymer composites with digitally programmable polarization anisotropy. Science Advances, 2019, 5, eaav8141.	10.3	103
27	Atomic layer etching of SiO₂ with Ar and CHF₃ plasmas: A selfâ€limiting process for aspect ratio independent etching. Plasma Processes and Polymers, 2019, 16, 1900051.	3.0	29
28	Redefining near-unity luminescence in quantum dots with photothermal threshold quantum yield. Science, 2019, 363, 1199-1202.	12.6	190
29	Very High Refractive Index Transition Metal Dichalcogenide Photonic Conformal Coatings by Conversion of ALD Metal Oxides. Scientific Reports, 2019, 9, 2768.	3.3	16
30	Effects of Defects on Band Structure and Excitons in WS₂ Revealed by Nanoscale Photoemission Spectroscopy. ACS Nano, 2019, 13, 1284-1291.	14.6	64
31	Titanium Disulfide Coated Carbon Nanotube Hybrid Electrodes Enable High Energy Density Symmetric Pseudocapacitors. Advanced Materials, 2018, 30, 1704754.	21.0	92
32	Electrostatically actuated encased cantilevers. Beilstein Journal of Nanotechnology, 2018, 9, 1381-1389.	2.8	6
33	Multiple Roles of a Non-fullerene Acceptor Contribute Synergistically for High-Efficiency Ternary Organic Photovoltaics. Joule, 2018, 2, 2154-2166.	24.0	85
34	Disentangling the Role of Surface Chemical Interactions on Interfacial Charge Transport at BiVO₄ Photoanodes. ACS Applied Materials & Interfaces, 2018, 10, 35129-35136.	8.0	9
35	Nanoscale imaging of charge carrier transport in water splitting photoanodes. Nature Communications, 2018, 9, 2597.	12.8	76
36	Atomic layer deposition for spacer defined double patterning of sub-10 nm titanium dioxide features. Nanotechnology, 2018, 29, 405302.	2.6	19

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37	Carrier Lifetimes in a<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:mi>I</mml:mi><mml:mi>I</mml:mi><mml:mi>I</mml:mi><mml:mtext>â^'</mml:mtext><mml:mi mathvariant="normal">N</mml:mi></mml:mrow></mml:math>Intermediate-Band Semiconductor. Physical Review Applied, 2017, 7, .	3.8	10
38	Experimental and AbÂInitio Ultrafast Carrier Dynamics in Plasmonic Nanoparticles. Physical Review Letters, 2017, 118, 087401.	7.8	116
39	Fabrication and optical characterization of polystyrene opal templates for the synthesis of scalable, nanoporous (photo)electrocatalytic materials by electrodeposition. Journal of Materials Chemistry A, 2017, 5, 11601-11614.	10.3	32
40	Probing Gap Plasmons Down to Subnanometer Scales Using Collapsible Nanofingers. ACS Nano, 2017, 11, 5836-5843.	14.6	35
41	Electron Mobility and Trapping in Ferrihydrite Nanoparticles. ACS Earth and Space Chemistry, 2017, 1, 216-226.	2.7	21
42	The important role of water in growth of monolayer transition metal dichalcogenides. 2D Materials, 2017, 4, 021024.	4.4	43
43	A multifunctional biphasic water splitting catalyst tailored for integration with high-performance semiconductor photoanodes. Nature Materials, 2017, 16, 335-341.	27.5	217
44	Mainstreaming inorganic metal-oxide resists for high-resolution lithography. Frontiers of Nanoscience, 2016, 11, 349-375.	0.6	9
45	Fabrication and characterization of WS2 based photonic structures (Conference Presentation). , 2016, , .		0
46	Spectroscopic elucidation of energy transfer in hybrid inorganicâ€“biological organisms for solar-to-chemical production. Proceedings of the National Academy of Sciences of the United States of America, 2016, 113, 11750-11755.	7.1	125
47	Plasma-enhanced atomic layer deposition for plasmonic TiN. , 2016, , .		2
48	Improved chemical and mechanical stability of peptoid nanosheets by photo-crosslinking the hydrophobic core. Chemical Communications, 2016, 52, 4753-4756.	4.1	18
49	Selective Laser Ablation in Resists and Block Copolymers for High Resolution Lithographic Patterning. Journal of Photopolymer Science and Technology = [Fotoporima Konwakai Shi], 2015, 28, 663-668.	0.3	4
50	Complex Materials by Atomic Layer Deposition. Advanced Materials, 2015, 27, 5778-5784.	21.0	33
51	Gallium Nitride Nanowires and Heterostructures: Toward Colorâ€Tunable and Whiteâ€Light Sources. Advanced Materials, 2015, 27, 5805-5812.	21.0	54
52	Interface Sharpness in Amorphous Multilayer Heterostructures and their Effect on Quantum Confinement. Microscopy and Microanalysis, 2015, 21, 2135-2136.	0.4	0
53	Exciton Mobility in Organic Photovoltaic Heterojunctions from Femtosecond Stimulated Raman. Journal of Physical Chemistry Letters, 2015, 6, 2919-2923.	4.6	16
54	Rate and mechanism of the photoreduction of birnessite (MnO ₂) nanosheets. Proceedings of the National Academy of Sciences of the United States of America, 2015, 112, 4600-4605.	7.1	82

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55	Gain and Raman line-broadening with graphene coated diamond-shape nano-antennas. Nanoscale, 2015, 7, 15321-15331.	5.6	4
56	Key Factors Affecting the Reproducibility of Synthesis and Growth Mechanism of Near-Infrared Absorbing Hollow Gold Nanospheres. Chemistry of Materials, 2014, 26, 6805-6810.	6.7	34
57	Efficient and Sustained Photoelectrochemical Water Oxidation by Cobalt Oxide/Silicon Photoanodes with Nanotextured Interfaces. Journal of the American Chemical Society, 2014, 136, 6191-6194.	13.7	204
58	Coupling model for an extended-range plasmonic optical transformer scanning probe. Light: Science and Applications, 2014, 3, e195-e195.	16.6	7
59	Chiral Nanostructures Studied Using Polarization-Dependent NOLES Imaging. Journal of Physical Chemistry A, 2014, 118, 8393-8401.	2.5	11
60	Basics and practice of surface enhanced Raman scattering (SERS) and tip enhanced Raman scattering (TERS). Biomedical Spectroscopy and Imaging, 2014, 3, 121-159.	1.2	5
61	Life Beyond Diffraction: Opening New Routes to Materials Characterization with Nextâ€Generation Optical Nearâ€Field Approaches. Advanced Functional Materials, 2013, 23, 2539-2553.	14.9	29
62	Size-Dependent Phononic Properties of PdO Nanocrystals Probed by Nanoscale Optical Thermometry. Journal of Physical Chemistry C, 2013, 117, 21558-21568.	3.1	20
63	High spatial resolution Raman thermometry analysis of TiO2 microparticles. Review of Scientific Instruments, 2013, 84, 104906.	1.3	15
64	Surface enhanced Raman spectroscopy by titanium nitride non-continuous thin films. Thin Solid Films, 2013, 531, 144-146.	1.8	23
65	Triggering and Monitoring Plasmonâ€Enhanced Reactions by Optical Nanoantennas Coupled to Photocatalytic Beads. Small, 2013, 9, 3301-3307.	10.0	54
66	Selective laser ablation of radiation exposed methyl acetoxy calix(6)arene. Journal of Vacuum Science and Technology B:Nanotechnology and Microelectronics, 2012, 30, 06FI02.	1.2	3
67	Sub-20 nm laser ablation for lithographic dry development. Nanotechnology, 2012, 23, 185301.	2.6	7
68	Structure-Dependent Coherent Acoustic Vibrations of Hollow Gold Nanospheres. Nano Letters, 2011, 11, 3258-3262.	9.1	40
69	Gold Nanocone Near-Field Scanning Optical Microscopy Probes. ACS Nano, 2011, 5, 2570-2579.	14.6	82
70	Highly reproducible synthesis of hollow gold nanospheres with near infrared surface plasmon absorption using PVP as stabilizing agent. Journal of Materials Chemistry, 2011, 21, 2344-2350.	6.7	85
71	Radiation Engineering of Optical Antennas for Maximum Field Enhancement. Nano Letters, 2011, 11, 2606-2610.	9.1	165
72	Raman and Surface-Enhanced Raman Detection of Domoic Acid and Saxitoxin. Applied Spectroscopy, 2011, 65, 159-164.	2.2	16

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73	Optical cavity characterization in nanowires via self-generated broad-band emission. Optics Express, 2011, 19, 8903.	3.4	9
74	Hyperspectral Nanoscale Imaging on Dielectric Substrates with Coaxial Optical Antenna Scan Probes. , 2011, , .		0
75	Hyperspectral Nanoscale Imaging on Dielectric Substrates with Coaxial Optical Antenna Scan Probes.. Nano Letters, 2011, 11, 1201-1207.	9.1	111
76	A Roadmap to Implementing Metalâ€“Organic Frameworks in Electronic Devices: Challenges and Critical Directions. Chemistry - A European Journal, 2011, 17, 11372-11388.	3.3	403
77	Label-free in situ Imaging of Lignification in Plant Cell Walls. Journal of Visualized Experiments, 2010, , .	0.3	2
78	Quantifying reaction spread and x-ray exposure sensitivity in hydrogen silsesquioxane latent resist patterns with x-ray spectromicroscopy. Journal of Vacuum Science and Technology B:Nanotechnology and Microelectronics, 2010, 28, 1304-1313.	1.2	6
79	Crystal Grain Orientation in Organic Homo- and Heteroepitaxy of Pentacene and Perfluoropentacene Studied with X-ray Spectromicroscopy. Journal of Physical Chemistry C, 2010, 114, 13061-13067.	3.1	34
80	Raman imaging of cell wall polymers in Arabidopsis thaliana. Biochemical and Biophysical Research Communications, 2010, 395, 521-523.	2.1	42
81	Direct Chemical Vapor Deposition of Graphene on Dielectric Surfaces. Nano Letters, 2010, 10, 1542-1548.	9.1	439
82	Functional plasmonic antenna scanning probes fabricated by induced-deposition mask lithography. Nanotechnology, 2010, 21, 065306.	2.6	67
83	Observing hydrogen silsesquioxane crossâ€linking with broadband CARS. Journal of Raman Spectroscopy, 2009, 40, 770-774.	2.5	23
84	Label-free in situ imaging of lignification in the cell wall of low lignin transgenic Populus trichocarpa. Planta, 2009, 230, 589-597.	3.2	80
85	Nanometer-scale size dependent imaging of cetyl trimethyl ammonium bromide (CTAB) capped and uncapped gold nanoparticles by apertureless near-field optical microscopy. Chemical Physics Letters, 2009, 474, 146-152.	2.6	19
86	Electronic Relaxation Dynamics in Isolated and Aggregated Hollow Gold Nanospheres. Journal of the American Chemical Society, 2009, 131, 13892-13893.	13.7	36
87	Rapid, Solution-Based Characterization of Optimized SERS Nanoparticle Substrates. Journal of the American Chemical Society, 2009, 131, 162-169.	13.7	100
88	Novel Optical Properties and Emerging Applications of Metal Nanostructures. Journal of Physical Chemistry C, 2008, 112, 10323-10337.	3.1	279
89	Excitation-Wavelength Dependence of Fluorescence Intermittency in CdSe Nanorods. ACS Nano, 2008, 2, 2143-2153.	14.6	53
90	Hollow Goldâ^'Silver Double-Shell Nanospheres:â€‰ Structure, Optical Absorption, and Surface-Enhanced Raman Scattering. Journal of Physical Chemistry C, 2008, 112, 6319-6329.	3.1	114

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91	Highly Sensitive and Compact Molecular Sensor Using Surface Enhanced Raman Scattering and Optical Fibers. , 2007, , .		0
92	Molecular probes based on microstructured fibers and surface enhanced Raman scattering. , 2007, , .		3
93	Gold Nanotubes Synthesized via Magnetic Alignment of Cobalt Nanoparticles as Templates. Journal of Physical Chemistry C, 2007, 111, 16080-16082.	3.1	42
94	Reduction of HAuCl4by Na2S Revisited:â€‰ The Case for Au Nanoparticle Aggregates and Against Au2S/Au Core/Shell Particlesâ€. Journal of Physical Chemistry C, 2007, 111, 8892-8901.	3.1	56
95	Silica-Coated CdTe Quantum Dots Functionalized with Thiols for Bioconjugation to IgG Proteins. Journal of Physical Chemistry B, 2006, 110, 5779-5789.	2.6	258
96	Improving Nanoprobes Using Surface-Enhanced Raman Scattering from 30-nm Hollow Gold Particles. Analytical Chemistry, 2006, 78, 4732-4736.	6.5	198
97	Synthesis, Characterization, and Tunable Optical Properties of Hollow Gold Nanospheresâ€. Journal of Physical Chemistry B, 2006, 110, 19935-19944.	2.6	485
98	Light-induced further agglomeration of metal particles. , 2006, , .		2
99	Optical trapping and light-induced agglomeration of gold nanoparticle aggregates. Physical Review B, 2006, 73, .	3.2	64
100	Structural correlations with shifts in the extended plasma resonance of gold nanoparticle aggregates. Optical Materials, 2005, 27, 1197-1203.	3.6	23
101	Electrical and thermal conductivities of gold and silver nanoparticles in solutions and films and electrical field enhanced Surface-Enhanced Raman Scattering (SERS). , 2005, 5929, 193.		9
102	Ultra-sensitive compact fiber sensor based on nanoparticle surface enhanced Raman scattering. , 2005, , .		12
103	Comment on â€œGold Nanoshells Improve Single Nanoparticle Molecular Sensorsâ€• Nano Letters, 2005, 5, 809-810.	9.1	51
104	Surface-enhanced Raman scattering sensor based on D-shaped fiber. Applied Physics Letters, 2005, 87, 123105.	3.3	89
105	The role of reductant oxidation state in the formation and function of gold nanoparticle aggregates for SERS applications. , 2004, 5513, 213.		3
106	Unique Gold Nanoparticle Aggregates as a Highly Active Surface-Enhanced Raman Scattering Substrate. Journal of Physical Chemistry B, 2004, 108, 19191-19197.	2.6	308
107	Ultrafast study of electronic relaxation dynamics in Au11 nanoclusters. Chemical Physics Letters, 2004, 383, 31-34.	2.6	43
108	A technique to compare polythiophene solid-state dye sensitized TiO2 solar cells to liquid junction devices. Solar Energy Materials and Solar Cells, 2003, 76, 85-105.	6.2	147

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109	Optical and electrochemical characterization of poly(3-undecyl-2,2â€²-bithiophene) in thin film solid state TiO2 photovoltaic solar cells. Synthetic Metals, 2003, 132, 197-204.	3.9	64
110	Ultrafast Electronic Relaxation and Coherent Vibrational Oscillation of Strongly Coupled Gold Nanoparticle Aggregates. Journal of the American Chemical Society, 2003, 125, 549-553.	13.7	103
111	Synthesis and characterization of gold nanoparticle aggregates as novel substrates for surface-enhanced Raman scattering. , 2003, , .		3
112	Characterization of nanocrystalline and thin film TiO2 solar cells with poly(3-undecyl-2,2â€²-bithiophene) as a sensitizer and hole conductor. Journal of Electroanalytical Chemistry, 2002, 522, 40-48.	3.8	98
113	Raman Scattering: Surface-Enhanced. , 0, , 4126-4135.		0