Martial Duchamp

List of Publications by Year
in descending order

88 papers	4,514 citations	186265 28 h-index	102487 66 g-index
101 all docs	101 docs citations	101 times ranked	8720 citing authors

#	Article	IF	Citations
1	Recovery Mechanisms in Aged Kesterite Solar Cells. ACS Applied Energy Materials, 2022, 5, 5404-5414.	5.1	6
2	Enhanced Spin Hall Effect in Sâ€Implanted Pt. Advanced Quantum Technologies, 2021, 4, .	3.9	15
3	Operando and in situ in a TEM imaging in a cryogenic temperature range. Microscopy and Microanalysis, 2021, 27, 386-387.	0.4	0
4	Challenges and Applications to Operando and In Situ TEM Imaging and Spectroscopic Capabilities in a Cryogenic Temperature Range. Accounts of Chemical Research, 2021, 54, 3125-3135.	15.6	13
5	Facet controlled anisotropic magnons in Y3Fe5O12 thin films. Applied Physics Letters, 2021, 119, .	3.3	6
6	Operando Direct Observation of Filament Formation in Resistive Switching Devices Enabled by a Topological Transformation Molecule. Nano Letters, 2021, 21, 9262-9269.	9.1	4
7	Real-Time Electron Nanoscopy of Photovoltaic Absorber Formation from Kesterite Nanoparticles. ACS Applied Energy Materials, 2020, 3, 122-128.	5.1	5
8	Multi-modal and multi-scale non-local means method to analyze spectroscopic datasets. Ultramicroscopy, 2020, 209, 112877.	1.9	6
9	Recrystallization-based grain boundary engineering of 316L stainless steel produced via selective laser melting. Acta Materialia, 2020, 200, 366-377.	7.9	132
10	Magnetoimpedance of Epitaxial Y₃Fe₅O₁₂ (001) Thin Film in Low-Frequency Regime. ACS Applied Materials & Interfaces, 2020, 12, 41802-41809.	8.0	8
11	Elastic distortion determining conduction in BiFeO₃ phase boundaries. RSC Advances, 2020, 10, 27954-27960.	3.6	0
12	STEM electron beam-induced current measurements of organic-inorganic perovskite solar cells. Ultramicroscopy, 2020, 217, 113047.	1.9	7
13	Atomic resolution enabled STEM imaging of nanocrystals at cryogenic temperature. JPhys Materials, 2020, 3, 034006.	4.2	8
14	Generation of electron vortices using nonexact electric fields. Physical Review Research, 2020, 2, .	3.6	18
15	Innovative fabrication of low-cost kesterite solar cells for distributed energy applications. , 2020, , .		0
16	Investigation of the Oxidation Reaction of LiFePO4 Cathode Material using Environmental TEM. Microscopy and Microanalysis, 2019, 25, 1858-1859.	0.4	0
17	A diecast mineralization process forms the tough mantis shrimp dactyl club. Proceedings of the National Academy of Sciences of the United States of America, 2019, 116, 8685-8692.	7.1	33
18	Rational molecular passivation for high-performance perovskite light-emitting diodes. Nature Photonics, 2019, 13, 418-424.	31.4	970

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19	Time-Resolved Observations of Liquidâ€“Liquid Phase Separation at the Nanoscale Using in Situ Liquid Transmission Electron Microscopy. Journal of the American Chemical Society, 2019, 141, 7202-7210.	13.7	69
20	Effect of TaN intermediate layer on the back contact reaction of sputter-deposited Cu poor Cu2ZnSnS4 and Mo. Applied Surface Science, 2019, 471, 277-288.	6.1	21
21	Largeâ€Area Atomic Layers of the Chargeâ€Densityâ€Wave Conductor TiSe₂. Advanced Materials, 2018, 30, 1704382.	21.0	60
22	Mechanical response of CH3NH3PbI3 nanowires. Applied Physics Letters, 2018, 112, .	3.3	15
23	Fine electron biprism on a Si-on-insulator chip for off-axis electron holography. Ultramicroscopy, 2018, 185, 81-89.	1.9	5
24	What Limits Mobility in Hydrogenated Indium Oxide?. , 2018, , .		0
25	Design and fabrication of InAs/GaAs QD based intermediate band solar cells by quantum engineering. , 2018, , .		3
26	Atomic-scale quantification of charge densities in two-dimensional materials. Physical Review B, 2018, 98, .	3.2	36
27	Giant resistive switching in mixed phase BiFeO₃via phase population control. Nanoscale, 2018, 10, 17629-17637.	5.6	18
28	Exploring two dimensional Co0.33In2.67S2.29Se1.71 as alloy type negative electrode for Li-ion battery with olivine LiFePO4 cathode. Materials Today Energy, 2018, 9, 19-26.	4.7	2
29	Carrier scattering mechanisms limiting mobility in hydrogen-doped indium oxide. Journal of Applied Physics, 2018, 123, .	2.5	15
30	Aligned and Graded Typeâ€II Ruddlesdenâ€“Popper Perovskite Films for Efficient Solar Cells. Advanced Energy Materials, 2018, 8, 1800185.	19.5	247
31	Quantum engineering InAs/GaAs single-junction concentrator solar cells (Conference Presentation). , 2018, , .		2
32	Microstructural characterization of Cr-doped (Bi,Sb)₂Te₃thin films. CrystEngComm, 2017, 19, 3633-3639.	2.6	6
33	Generation of electron vortex beams using line charges via the electrostatic Aharonov-Bohm effect. Ultramicroscopy, 2017, 181, 191-196.	1.9	16
34	Single crystalline superstructured stable single domain magnetite nanoparticles. Scientific Reports, 2017, 7, 45484.	3.3	48
35	Activation of surface oxygen sites on an iridium-based model catalyst for the oxygen evolution reaction. Nature Energy, 2017, 2, .	39.5	435
36	Quantum Engineering of InAs/GaAs Quantum Dot Based Intermediate Band Solar Cells. ACS Photonics, 2017, 4, 2745-2750.	6.6	64

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37	Denoising Electron-energy Loss Data Using Non-local Means Filters. Microscopy and Microanalysis, 2017, 23, 106-107.	0.4	1
38	Enhancing the optoelectronic properties of amorphous zinc tin oxide by subgap defect passivation: A theoretical and experimental demonstration. Physical Review B, 2017, 95, .	3.2	31
39	Quantitative measurement of mean inner potential and specimen thickness from high-resolution off-axis electron holograms of ultra-thin layered WSe2. Ultramicroscopy, 2017, 178, 38-47.	1.9	23
40	Mapping atomic electric fields and charge densities by four-dimensional STEM. Acta Crystallographica Section A: Foundations and Advances, 2017, 73, C119-C119.	0.1	2
41	New experiments with a double crystal electron interferometer. EPJ Applied Physics, 2017, 78, 10701.	0.7	8
42	Measurement of Atomic Electric Fields by Scanning Transmission Electron Microscopy (STEM) Employing Ultrafast Detectors. Microscopy and Microanalysis, 2016, 22, 484-485.	0.4	1
43	Electric and Magnetic Field Mapping With the pnCCD (S)TEM Camera. Microscopy and Microanalysis, 2016, 22, 256-257.	0.4	0
44	Singleâ€Crystalline Wâ€Doped VO₂ Nanobeams with Highly Reversible Electrical and Plasmonic Responses Near Room Temperature. Advanced Materials Interfaces, 2016, 3, 1600164.	3.7	60
45	In situ transmission electron microscopy of resistive switching in thin silicon oxide layers. Resolution and Discovery, 2016, 1, 27-33.	0.4	16
46	Strain and compositional fluctuations in Al0.81In0.19N/GaN heterostructures. Applied Physics Letters, 2016, 109, 132102.	3.3	4
47	Intrinsic electronic properties of high-quality wurtzite InN. Physical Review B, 2016, 94, .	3.2	8
48	Hollow metal nanostructures for enhanced plasmonics (Conference Presentation). , 2016, , .		0
49	Effect of lanthanum doping on modulating the thermochromic properties of VO₂thin films. RSC Advances, 2016, 6, 48455-48461.	3.6	44
50	Vapor transport growth of MoS2 nucleated on SiO2 patterns and graphene flakes. Nano Research, 2016, 9, 3504-3514.	10.4	14
51	Effect of Zinc Incorporation on the Performance of Red Light Emitting InP Core Nanocrystals. Inorganic Chemistry, 2016, 55, 8381-8386.	4.0	31
52	In Situ TEM Analysis of Organicâ€“Inorganic Metal-Halide Perovskite Solar Cells under Electrical Bias. Nano Letters, 2016, 16, 7013-7018.	9.1	115
53	Zig-zag Self-assembly of Magnetic Octahedral Fe3O4 Nanocrystals using in situ Liquid Transmission Electron Microscopy. Microscopy and Microanalysis, 2016, 22, 36-37.	0.4	8
54	High Temperature Stability of Amorphous Zn-Sn-O Transparent Conductive Oxides Investigated by In Situ TEM and X-ray Diffraction. Microscopy and Microanalysis, 2016, 22, 1582-1583.	0.4	0

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55	Strategies for Doped Nanocrystalline Silicon Integration in Silicon Heterojunction Solar Cells. IEEE Journal of Photovoltaics, 2016, 6, 1132-1140.	2.5	54
56	Terbium-Doped VO₂ Thin Films: Reduced Phase Transition Temperature and Largely Enhanced Luminous Transmittance. Langmuir, 2016, 32, 759-764.	3.5	112
57	Tuning the Plasmonic Response up: Hollow Cuboid Metal Nanostructures. ACS Photonics, 2016, 3, 770-779.	6.6	49
58	Three-dimensional Surface Charge Reconstructions of Surface Plasmon Modes of Silver Right Bipyramids. Microscopy and Microanalysis, 2015, 21, 2225-2226.	0.4	0
59	Resonances of nanoparticles with poor plasmonic metal tips. Scientific Reports, 2015, 5, 17431.	3.3	42
60	Direct observation of doping incorporation pathways in self-catalytic GaMnAs nanowires. Journal of Applied Physics, 2015, 118, .	2.5	9
61	GaN heterostructures with diamond and graphene. Semiconductor Science and Technology, 2015, 30, 114001.	2.0	5
62	STEMâ€“EELS analysis reveals stable high-density He in nanopores of amorphous silicon coatings deposited by magnetron sputtering. Nanotechnology, 2015, 26, 075703.	2.6	29
63	Graphoepitaxy of Highâ€Quality GaN Layers on Graphene/6Hâ€“SiC. Advanced Materials Interfaces, 2015, 2, 1400230.	3.7	23
64	Eigenmode Tomography of Surface Charge Oscillations of Plasmonic Nanoparticles by Electron Energy Loss Spectroscopy. ACS Photonics, 2015, 2, 1628-1635.	6.6	51
65	On stoichiometry and intermixing at the spinel/perovskite interface in CoFe2O4/BaTiO3 thin films. Nanoscale, 2015, 7, 218-224.	5.6	17
66	Silicon-Light: a European project aiming at high efficiency thin film silicon solar cells on foil. EPJ Photovoltaics, 2014, 5, 55203.	1.6	0
67	The origin of high efficiency in low-temperature solution-processable bilayer organometal halide hybrid solar cells. Energy and Environmental Science, 2014, 7, 399-407.	30.8	965
68	Understanding the Role of Single Molecular ZnS Precursors in the Synthesis of In(Zn)P/ZnS Nanocrystals. ACS Applied Materials & Interfaces, 2014, 6, 18233-18242.	8.0	26
69	Analysis of InAs/GaAs quantum dot solar cells using Suns- V oc measurements. Solar Energy Materials and Solar Cells, 2014, 130, 241-245.	6.2	43
70	Atomic resolution imaging and spectroscopy of barium atoms and functional groups on graphene oxide. Ultramicroscopy, 2014, 145, 66-73.	1.9	12
71	Convenient Preparation of High-Quality Specimens for Annealing Experiments in the Transmission Electron Microscope. Microscopy and Microanalysis, 2014, 20, 1638-1645.	0.4	44
72	New progress in the fabrication of nâ€“iâ€“p micromorph solar cells for opaque substrates. Solar Energy Materials and Solar Cells, 2013, 114, 147-155.	6.2	29

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73	Combined model of non-conformal layer growth for accurate optical simulation of thin-film silicon solar cells. Solar Energy Materials and Solar Cells, 2013, 119, 59-66.	6.2	48
74	Effect of post-growth annealing on secondary phase formation in low-temperature-grown Mn-doped GaAs. Journal Physics D: Applied Physics, 2013, 46, 145309.	2.8	9
75	Defects in paramagnetic Co-doped ZnO films studied by transmission electron microscopy. Journal of Applied Physics, 2013, 114, .	2.5	6
76	Compositional study of defects in microcrystalline silicon solar cells using spectral decomposition in the scanning transmission electron microscope. Applied Physics Letters, 2013, 102, .	3.3	20
77	Electron energy-loss spectroscopy of boron-doped layers in amorphous thin film silicon solar cells. Journal of Applied Physics, 2013, 113, .	2.5	7
78	EELS measurements of boron concentration profiles in p-a-Si and nip a-Si solar cells. Journal of Non-Crystalline Solids, 2012, 358, 2179-2182.	3.1	5
79	Quenching of TiO2 photo catalysis by silver nanoparticles. Journal of Photochemistry and Photobiology A: Chemistry, 2012, 230, 10-14.	3.9	11
80	Mapping boron in silicon solar cells using electron energy-loss spectroscopy. Journal of Physics: Conference Series, 2011, 326, 012052.	0.4	1
81	Conventional and 360 degree electron tomography of a micro-crystalline silicon solar cell. Journal of Physics: Conference Series, 2011, 326, 012057.	0.4	1
82	Reflectance Improvement by Thermal Annealing of Sputtered Ag/ZnO Back Reflectors in a-Si:H Thin Film Silicon Solar Cells. Materials Research Society Symposia Proceedings, 2011, 1321, 63.	0.1	0
83	Production of high quality carbon nanotubes for less than $1 per gram. Physica Status Solidi C: Current Topics in Solid State Physics, 2010, 7, 1236-1240.	0.8	16
84	Reinforcing multiwall carbon nanotubes by electron beam irradiation. Journal of Applied Physics, 2010, 108, 084314.	2.5	16
85	Controlled Positioning of Carbon Nanotubes by Dielectrophoresis: Insights into the Solvent and Substrate Role. ACS Nano, 2010, 4, 279-284.	14.6	85
86	Mechanical and electronic properties of vanadium oxide nanotubes. Journal of Applied Physics, 2009, 105, .	2.5	26
87	Synthesis and mechanical properties of carbon nanotubes produced by the water assisted CVD process. Physica Status Solidi (B): Basic Research, 2009, 246, 2457-2460.	1.5	38
88	Uniformly dispersed deposition of colloidal nanoparticles and nanowires by boiling. Applied Physics Letters, 2007, 91, 173112.	3.3	30