

Martial Duchamp

List of Publications by Year in descending order

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88
papers

4,514
citations

185998

28
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102304

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.	2.5	6
2	Enhanced Spin Hall Effect in Sâ€ implanted Pt. Advanced Quantum Technologies, 2021, 4, .	1.8	15
3	Operando and in situ in a TEM imaging in a cryogenic temperature range. Microscopy and Microanalysis, 2021, 27, 386-387.	0.2	0
4	Challenges and Applications to <i>Operando</i> and <i>In Situ</i> TEM Imaging and Spectroscopic Capabilities in a Cryogenic Temperature Range. Accounts of Chemical Research, 2021, 54, 3125-3135.	7.6	13
5	Facet controlled anisotropic magnons in Y3Fe5O12 thin films. Applied Physics Letters, 2021, 119, .	1.5	6
6	Operando Direct Observation of Filament Formation in Resistive Switching Devices Enabled by a Topological Transformation Molecule. Nano Letters, 2021, 21, 9262-9269.	4.5	4
7	Real-Time Electron Nanoscopy of Photovoltaic Absorber Formation from Kesterite Nanoparticles. ACS Applied Energy Materials, 2020, 3, 122-128.	2.5	5
8	Multi-modal and multi-scale non-local means method to analyze spectroscopic datasets. Ultramicroscopy, 2020, 209, 112877.	0.8	6
9	Recrystallization-based grain boundary engineering of 316L stainless steel produced via selective laser melting. Acta Materialia, 2020, 200, 366-377.	3.8	132
10	Magnetoimpedance of Epitaxial Y₃Fe₅O₁₂ (001) Thin Film in Low-Frequency Regime. ACS Applied Materials & Interfaces, 2020, 12, 41802-41809.	4.0	8
11	Elastic distortion determining conduction in BiFeO₃ phase boundaries. RSC Advances, 2020, 10, 27954-27960.	1.7	0
12	STEM electron beam-induced current measurements of organic-inorganic perovskite solar cells. Ultramicroscopy, 2020, 217, 113047.	0.8	7
13	Atomic resolution enabled STEM imaging of nanocrystals at cryogenic temperature. JPhys Materials, 2020, 3, 034006.	1.8	8
14	Generation of electron vortices using nonexact electric fields. Physical Review Research, 2020, 2, .	1.3	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.	0.2	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.	3.3	33
18	Rational molecular passivation for high-performance perovskite light-emitting diodes. Nature Photonics, 2019, 13, 418-424.	15.6	970

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19	Time-Resolved Observations of Liquid-Liquid Phase Separation at the Nanoscale Using <i>in Situ</i> Liquid Transmission Electron Microscopy. <i>Journal of the American Chemical Society</i> , 2019, 141, 7202-7210.	6.6	69
20	Effect of TaN intermediate layer on the back contact reaction of sputter-deposited Cu poor Cu ₂ ZnSnS ₄ and Mo. <i>Applied Surface Science</i> , 2019, 471, 277-288.	3.1	21
21	Large-Area Atomic Layers of the Charge-Density-Wave Conductor TiSe ₂ . <i>Advanced Materials</i> , 2018, 30, 1704382.	11.1	60
22	Mechanical response of CH ₃ NH ₃ PbI ₃ nanowires. <i>Applied Physics Letters</i> , 2018, 112, .	1.5	15
23	Fine electron biprism on a Si-on-insulator chip for off-axis electron holography. <i>Ultramicroscopy</i> , 2018, 185, 81-89.	0.8	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. <i>Physical Review B</i> , 2018, 98, .	1.1	36
27	Giant resistive switching in mixed phase BiFeO ₃ <i>via</i> phase population control. <i>Nanoscale</i> , 2018, 10, 17629-17637.	2.8	18
28	Exploring two dimensional Co _{0.33} In _{2.67} S _{2.29} Se _{1.71} as alloy type negative electrode for Li-ion battery with olivine LiFePO ₄ cathode. <i>Materials Today Energy</i> , 2018, 9, 19-26.	2.5	2
29	Carrier scattering mechanisms limiting mobility in hydrogen-doped indium oxide. <i>Journal of Applied Physics</i> , 2018, 123, .	1.1	15
30	Aligned and Graded Type-II Ruddlesden-Popper Perovskite Films for Efficient Solar Cells. <i>Advanced Energy Materials</i> , 2018, 8, 1800185.	10.2	247
31	Quantum engineering InAs/GaAs single-junction concentrator solar cells (Conference Presentation). , 2018, , .		2
32	Microstructural characterization of Cr-doped (Bi,Sb) ₂ Te ₃ thin films. <i>CrystEngComm</i> , 2017, 19, 3633-3639.	1.3	6
33	Generation of electron vortex beams using line charges via the electrostatic Aharonov-Bohm effect. <i>Ultramicroscopy</i> , 2017, 181, 191-196.	0.8	16
34	Single crystalline superstructured stable single domain magnetite nanoparticles. <i>Scientific Reports</i> , 2017, 7, 45484.	1.6	48
35	Activation of surface oxygen sites on an iridium-based model catalyst for the oxygen evolution reaction. <i>Nature Energy</i> , 2017, 2, .	19.8	435
36	Quantum Engineering of InAs/GaAs Quantum Dot Based Intermediate Band Solar Cells. <i>ACS Photonics</i> , 2017, 4, 2745-2750.	3.2	64

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37	Denoising Electron-energy Loss Data Using Non-local Means Filters. <i>Microscopy and Microanalysis</i> , 2017, 23, 106-107.	0.2	1
38	Enhancing the optoelectronic properties of amorphous zinc tin oxide by subgap defect passivation: A theoretical and experimental demonstration. <i>Physical Review B</i> , 2017, 95, .	1.1	31
39	Quantitative measurement of mean inner potential and specimen thickness from high-resolution off-axis electron holograms of ultra-thin layered WSe ₂ . <i>Ultramicroscopy</i> , 2017, 178, 38-47.	0.8	23
40	Mapping atomic electric fields and charge densities by four-dimensional STEM. <i>Acta Crystallographica Section A: Foundations and Advances</i> , 2017, 73, C119-C119.	0.0	2
41	New experiments with a double crystal electron interferometer. <i>EPJ Applied Physics</i> , 2017, 78, 10701.	0.3	8
42	Measurement of Atomic Electric Fields by Scanning Transmission Electron Microscopy (STEM) Employing Ultrafast Detectors. <i>Microscopy and Microanalysis</i> , 2016, 22, 484-485.	0.2	1
43	Electric and Magnetic Field Mapping With the pnCCD (S)TEM Camera. <i>Microscopy and Microanalysis</i> , 2016, 22, 256-257.	0.2	0
44	Single-Crystalline W-Doped VO ₂ Nanobeams with Highly Reversible Electrical and Plasmonic Responses Near Room Temperature. <i>Advanced Materials Interfaces</i> , 2016, 3, 1600164.	1.9	60
45	<i>In situ</i> transmission electron microscopy of resistive switching in thin silicon oxide layers. <i>Resolution and Discovery</i> , 2016, 1, 27-33.	0.9	16
46	Strain and compositional fluctuations in Al _{0.81} In _{0.19} N/GaN heterostructures. <i>Applied Physics Letters</i> , 2016, 109, 132102.	1.5	4
47	Intrinsic electronic properties of high-quality wurtzite InN. <i>Physical Review B</i> , 2016, 94, .	1.1	8
48	Hollow metal nanostructures for enhanced plasmonics (Conference Presentation)., 2016, , .		0
49	Effect of lanthanum doping on modulating the thermochromic properties of VO ₂ thin films. <i>RSC Advances</i> , 2016, 6, 48455-48461.	1.7	44
50	Vapor transport growth of MoS ₂ nucleated on SiO ₂ patterns and graphene flakes. <i>Nano Research</i> , 2016, 9, 3504-3514.	5.8	14
51	Effect of Zinc Incorporation on the Performance of Red Light Emitting InP Core Nanocrystals. <i>Inorganic Chemistry</i> , 2016, 55, 8381-8386.	1.9	31
52	In Situ TEM Analysis of Organic-Inorganic Metal-Halide Perovskite Solar Cells under Electrical Bias. <i>Nano Letters</i> , 2016, 16, 7013-7018.	4.5	115
53	Zig-zag Self-assembly of Magnetic Octahedral Fe ₃ O ₄ Nanocrystals using in situ Liquid Transmission Electron Microscopy. <i>Microscopy and Microanalysis</i> , 2016, 22, 36-37.	0.2	8
54	High Temperature Stability of Amorphous Zn-Sn-O Transparent Conductive Oxides Investigated by In Situ TEM and X-ray Diffraction. <i>Microscopy and Microanalysis</i> , 2016, 22, 1582-1583.	0.2	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.	1.5	54
56	Terbium-Doped VO ₂ Thin Films: Reduced Phase Transition Temperature and Largely Enhanced Luminous Transmittance. Langmuir, 2016, 32, 759-764.	1.6	112
57	Tuning the Plasmonic Response up: Hollow Cuboid Metal Nanostructures. ACS Photonics, 2016, 3, 770-779.	3.2	49
58	Three-dimensional Surface Charge Reconstructions of Surface Plasmon Modes of Silver Right Bipyramids. Microscopy and Microanalysis, 2015, 21, 2225-2226.	0.2	0
59	Resonances of nanoparticles with poor plasmonic metal tips. Scientific Reports, 2015, 5, 17431.	1.6	42
60	Direct observation of doping incorporation pathways in self-catalytic GaMnAs nanowires. Journal of Applied Physics, 2015, 118, .	1.1	9
61	GaN heterostructures with diamond and graphene. Semiconductor Science and Technology, 2015, 30, 114001.	1.0	5
62	STEM-EELS analysis reveals stable high-density He in nanopores of amorphous silicon coatings deposited by magnetron sputtering. Nanotechnology, 2015, 26, 075703.	1.3	29
63	Graphoepitaxy of High-Quality GaN Layers on Graphene/6H-SiC. Advanced Materials Interfaces, 2015, 2, 1400230.	1.9	23
64	Eigenmode Tomography of Surface Charge Oscillations of Plasmonic Nanoparticles by Electron Energy Loss Spectroscopy. ACS Photonics, 2015, 2, 1628-1635.	3.2	51
65	On stoichiometry and intermixing at the spinel/perovskite interface in CoFe ₂ O ₄ /BaTiO ₃ thin films. Nanoscale, 2015, 7, 218-224.	2.8	17
66	Silicon-Light: a European project aiming at high efficiency thin film silicon solar cells on foil. EPJ Photovoltaics, 2014, 5, 55203.	0.8	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.	15.6	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.	4.0	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.	3.0	43
70	Atomic resolution imaging and spectroscopy of barium atoms and functional groups on graphene oxide. Ultramicroscopy, 2014, 145, 66-73.	0.8	12
71	Convenient Preparation of High-Quality Specimens for Annealing Experiments in the Transmission Electron Microscope. Microscopy and Microanalysis, 2014, 20, 1638-1645.	0.2	44
72	New progress in the fabrication of n-i-p micromorph solar cells for opaque substrates. Solar Energy Materials and Solar Cells, 2013, 114, 147-155.	3.0	29

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73	Combined model of non-conformal layer growth for accurate optical simulation of thin-film silicon solar cells. <i>Solar Energy Materials and Solar Cells</i> , 2013, 119, 59-66.	3.0	48
74	Effect of post-growth annealing on secondary phase formation in low-temperature-grown Mn-doped GaAs. <i>Journal Physics D: Applied Physics</i> , 2013, 46, 145309.	1.3	9
75	Defects in paramagnetic Co-doped ZnO films studied by transmission electron microscopy. <i>Journal of Applied Physics</i> , 2013, 114, .	1.1	6
76	Compositional study of defects in microcrystalline silicon solar cells using spectral decomposition in the scanning transmission electron microscope. <i>Applied Physics Letters</i> , 2013, 102, .	1.5	20
77	Electron energy-loss spectroscopy of boron-doped layers in amorphous thin film silicon solar cells. <i>Journal of Applied Physics</i> , 2013, 113, .	1.1	7
78	EELS measurements of boron concentration profiles in p-a-Si and nip a-Si solar cells. <i>Journal of Non-Crystalline Solids</i> , 2012, 358, 2179-2182.	1.5	5
79	Quenching of TiO ₂ photo catalysis by silver nanoparticles. <i>Journal of Photochemistry and Photobiology A: Chemistry</i> , 2012, 230, 10-14.	2.0	11
80	Mapping boron in silicon solar cells using electron energy-loss spectroscopy. <i>Journal of Physics: Conference Series</i> , 2011, 326, 012052.	0.3	1
81	Conventional and 360 degree electron tomography of a micro-crystalline silicon solar cell. <i>Journal of Physics: Conference Series</i> , 2011, 326, 012057.	0.3	1
82	Reflectance Improvement by Thermal Annealing of Sputtered Ag/ZnO Back Reflectors in a-Si:H Thin Film Silicon Solar Cells. <i>Materials Research Society Symposia Proceedings</i> , 2011, 1321, 63.	0.1	0
83	Production of high quality carbon nanotubes for less than \$1 per gram. <i>Physica Status Solidi C: Current Topics in Solid State Physics</i> , 2010, 7, 1236-1240.	0.8	16
84	Reinforcing multiwall carbon nanotubes by electron beam irradiation. <i>Journal of Applied Physics</i> , 2010, 108, 084314.	1.1	16
85	Controlled Positioning of Carbon Nanotubes by Dielectrophoresis: Insights into the Solvent and Substrate Role. <i>ACS Nano</i> , 2010, 4, 279-284.	7.3	85
86	Mechanical and electronic properties of vanadium oxide nanotubes. <i>Journal of Applied Physics</i> , 2009, 105, .	1.1	26
87	Synthesis and mechanical properties of carbon nanotubes produced by the water assisted CVD process. <i>Physica Status Solidi (B): Basic Research</i> , 2009, 246, 2457-2460.	0.7	38
88	Uniformly dispersed deposition of colloidal nanoparticles and nanowires by boiling. <i>Applied Physics Letters</i> , 2007, 91, 173112.	1.5	30