

Y G Du

List of Publications by Year in descending order

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103
papers

4,865
citations

94381

37
h-index

102432

66
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107
all docs

107
docs citations

107
times ranked

7312
citing authors

#	ARTICLE	IF	CITATIONS
1	Robust Atomic-Resolution Imaging of Lithium in Battery Materials by Center-of-Mass Scanning Transmission Electron Microscopy. ACS Nano, 2022, 16, 1358-1367.	7.3	10
2	Electrochemically induced amorphous-to-rock-salt phase transformation in niobium oxide electrode for Li-ion batteries. Nature Materials, 2022, 21, 795-803.	13.3	69
3	Preface for the special topic collection honoring Dr. Scott Chambers's™ 70th birthday and his leadership in the science and technology of oxide thin films. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 2022, 40, .	0.9	0
4	Spontaneous Lithiation of Binary Oxides during Epitaxial Growth on LiCoO ₂ . Nano Letters, 2022, 22, 5530-5537.	4.5	4
5	Surface dissolution and amorphization of electrocatalysts during oxygen evolution reaction: Atomistic features and viewpoints. Materials Today, 2022, 58, 221-237.	8.3	11
6	Porous FeCo Glassy Alloy as Bifunctional Support for High-Performance Zn-Air Battery. Advanced Energy Materials, 2021, 11, 2002204.	10.2	55
7	Towards data-driven next-generation transmission electron microscopy. Nature Materials, 2021, 20, 274-279.	13.3	130
8	Electrochemical Utilization of Iron IV in the Li _{1.3} Fe _{0.4} Nb _{0.3} O ₂ Disordered Rocksalt Cathode. Batteries and Supercaps, 2021, 4, 771-777.	2.4	6
9	N8 stabilized single-atom Pd for highly selective hydrogenation of acetylene. Journal of Catalysis, 2021, 395, 46-53.	3.1	16
10	Spontaneous phase segregation of Sr ₂ NiO ₃ and SrNi ₂ O ₃ during SrNiO ₃ heteroepitaxy. Science Advances, 2021, 7, .	4.7	12
11	Probing adsorbates on La _{1-x} Sr _x NiO ₃ surfaces under humid conditions: implications for the oxygen evolution reaction. Journal Physics D: Applied Physics, 2021, 54, 274003.	1.3	9
12	Determining valence band offsets in heterojunctions using a single core-level x-ray photoelectron spectrum. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 2021, 39, .	0.9	2
13	Tuning magnetic and optical properties through strain in epitaxial LaCrO ₃ thin films. Applied Physics Letters, 2021, 119, .	1.5	4
14	Understanding the Electronic Structure Evolution of Epitaxial LaNi _{1-x} Fe _x O ₃ Thin Films for Water Oxidation. Nano Letters, 2021, 21, 8324-8331.	4.5	31
15	Stable, high-performance, dendrite-free, seawater-based aqueous batteries. Nature Communications, 2021, 12, 237.	5.8	174
16	The Restructuring-Induced CoO _x Catalyst for Electrochemical Water Splitting. JACS Au, 2021, 1, 2216-2223.	3.6	32
17	Rapid and flexible segmentation of electron microscopy data using few-shot machine learning. Npj Computational Materials, 2021, 7, .	3.5	37
18	Modulation of the electronic states of perovskite SrCrO ₃ thin films through protonation via low-energy hydrogen plasma implantation approaches. Frontiers of Physics, 2020, 15, 1.	2.4	2

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19	Stabilizing atomic Pt with trapped interstitial F in alloyed PtCo nanosheets for high-performance zinc-air batteries. <i>Energy and Environmental Science</i> , 2020, 13, 884-895.	15.6	99
20	Mg ²⁺ Diffusion-Induced Structural and Property Evolution in Epitaxial Fe ₃ O ₄ Thin Films. <i>ACS Nano</i> , 2020, 14, 14887-14894.	7.3	6
21	Hole-Trapping-Induced Stabilization of Ni ⁴⁺ in SrNiO ₃ /LaFeO ₃ Superlattices. <i>Advanced Materials</i> , 2020, 32, e2005003.	11.1	26
22	Time- and strain-dependent nanoscale structural degradation in phase change epitaxial strontium ferrite films. <i>Npj Materials Degradation</i> , 2020, 4, .	2.6	11
23	Boosting alkaline hydrogen evolution: the dominating role of interior modification in surface electrocatalysis. <i>Energy and Environmental Science</i> , 2020, 13, 3110-3118.	15.6	87
24	Spontaneous redox continuum reveals sequestered technetium clusters and retarded mineral transformation of iron. <i>Communications Chemistry</i> , 2020, 3, .	2.0	8
25	Three-Dimensional Mass Spectrometric Imaging of Biological Structures Using a Vacuum-Compatible Microfluidic Device. <i>Analytical Chemistry</i> , 2020, 92, 13785-13793.	3.2	3
26	The sensitive surface chemistry of Co-free, Ni-rich layered oxides: identifying experimental conditions that influence characterization results. <i>Journal of Materials Chemistry A</i> , 2020, 8, 17487-17497.	5.2	41
27	Electronic Structure, Optical Properties, and Photoelectrochemical Activity of Sn-Doped Fe ₂ O ₃ Thin Films. <i>Journal of Physical Chemistry C</i> , 2020, 124, 12548-12558.	1.5	56
28	Dynamic Lattice Oxygen Participation on Perovskite LaNiO ₃ during Oxygen Evolution Reaction. <i>Journal of Physical Chemistry C</i> , 2020, 124, 15386-15390.	1.5	49
29	Experimental determination of electron attenuation lengths in complex materials by means of epitaxial film growth: Advantages and challenges. <i>Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films</i> , 2020, 38, .	0.9	13
30	Influence of strain on SrFeO ₃ - δ oxidation, reduction, and water dissociation: Insights from ambient pressure X-ray photoelectron spectroscopy. <i>Applied Surface Science</i> , 2020, 527, 146919.	3.1	6
31	Redox-Based Electrochemical Affinity Sensor for Detection of Aqueous Pertechnetate Anion. <i>ACS Sensors</i> , 2020, 5, 674-685.	4.0	6
32	Real-time mass spectrometric characterization of the solid-electrolyte interphase of a lithium-ion battery. <i>Nature Nanotechnology</i> , 2020, 15, 224-230.	15.6	280
33	Dynamic Atom Clusters on AuCu Nanoparticle Surface during CO Oxidation. <i>Journal of the American Chemical Society</i> , 2020, 142, 4022-4027.	6.6	36
34	Tuning the Electronic Structure of LaNiO ₃ through Alloying with Strontium to Enhance Oxygen Evolution Activity. <i>Advanced Science</i> , 2019, 6, 1901073.	5.6	76
35	Programmable Exposure of Pt Active Facets for Efficient Oxygen Reduction. <i>Angewandte Chemie - International Edition</i> , 2019, 58, 15848-15854.	7.2	81
36	Water-Processable P2-Na _{0.67} Ni _{0.22} Cu _{0.11} Mn _{0.56} Ti _{0.11} O ₂ Cathode Material for Sodium Ion Batteries. <i>Journal of the Electrochemical Society</i> , 2019, 166, A251-A257.	2.0	20

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37	Brownmillerite phase formation and evolution in epitaxial strontium ferrite heterostructures. Applied Physics Letters, 2019, 114, .	1.5	24
38	Strain Effect on Oxygen Evolution Reaction Activity of Epitaxial NdNiO ₃ Thin Films. ACS Applied Materials & Interfaces, 2019, 11, 12941-12947.	4.0	67
39	Photocatalytic behaviors of epitaxial BiVO ₄ (010) thin films. Applied Catalysis B: Environmental, 2019, 248, 115-119.	10.8	43
40	S-Doped MoP Nanoporous Layer Toward High-Efficiency Hydrogen Evolution in pH-Universal Electrolyte. ACS Catalysis, 2019, 9, 651-659.	5.5	167
41	Hole-induced electronic and optical transitions in $\text{La}_{1-x}\text{Sr}_x\text{CrO}_3$ thin films. ACS Applied Materials & Interfaces, 2018, 10, 17480-17486.	0.9	33
42	Inorganic BaSn nanocomposite materials for sulfate sequestration from complex aqueous solutions. Environmental Science: Nano, 2018, 5, 890-903.	2.2	5
43	Creation and Ordering of Oxygen Vacancies at WO ₃ and Perovskite Interfaces. ACS Applied Materials & Interfaces, 2018, 10, 17480-17486.	4.0	29
44	Chemical and electronic structure analysis of a SrTiO ₃ (001)/p-Ge(001) hydrogen evolution photocathode. MRS Communications, 2018, 8, 446-452.	0.8	8
45	Electronic and transport properties of Li-doped NiO epitaxial thin films. Journal of Materials Chemistry C, 2018, 6, 2275-2282.	2.7	122
46	Impact of Sr incorporation on Cr Oxidation and Water Dissociation in La _{1-x} Sr _x CrO ₃ . Advanced Materials Interfaces, 2018, 5, 1701363.	1.9	13
47	Negative impact of surface Ti ³⁺ defects on the photocatalytic hydrogen evolution activity of SrTiO ₃ . Applied Physics Letters, 2018, 112, .	1.5	13
48	Fundamental Insight into Zr Modification of Li- and Mn-Rich Cathodes: Combined Transmission Electron Microscopy and Electrochemical Impedance Spectroscopy Study. Chemistry of Materials, 2018, 30, 2566-2573.	3.2	106
49	MoS ₂ /TiO ₂ heterostructures as nonmetal plasmonic photocatalysts for highly efficient hydrogen evolution. Energy and Environmental Science, 2018, 11, 106-114.	15.6	326
50	Freestanding NiFe Oxyfluoride Holey Film with Ultrahigh Volumetric Capacitance for Flexible Asymmetric Supercapacitors. Small, 2018, 14, 1702295.	5.2	34
51	Direct Visualization of Li Dendrite Effect on LiCoO ₂ Cathode by In Situ TEM. Small, 2018, 14, e1803108.	5.2	34
52	Formation, Structural Variety, and Impact of Antiphase Boundaries on Li Diffusion in LiCoO ₂ Thin-Film Cathodes. Journal of Physical Chemistry Letters, 2018, 9, 5515-5520.	2.1	17
53	Strain-Driven Mn-Reorganization in Overlithiated Li _x Mn ₂ O ₄ Epitaxial Thin-Film Electrodes. ACS Applied Energy Materials, 2018, 1, 2526-2535.	2.5	18
54	Surprising formation of quasi-stable Tc(^{vi}) in high ionic strength alkaline media. Inorganic Chemistry Frontiers, 2018, 5, 2081-2091.	3.0	15

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55	Band alignment and electrocatalytic activity at the $\text{La}_{0.88}\text{Sr}_{0.12}\text{FeO}_3/\text{SrTiO}_3(001)$ heterojunction. <i>Applied Physics Letters</i> , 2018, 112, .	1.5	18
56	Tuning Bifunctional Oxygen Electrocatalysts by Changing the Rare-Earth Element in Perovskite Nickelates. <i>Advanced Functional Materials</i> , 2018, 28, 1803712.	7.8	122
57	Size-dependent dynamic structures of supported gold nanoparticles in CO oxidation reaction condition. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2018, 115, 7700-7705.	3.3	183
58	Linking surface chemistry to photovoltage in Sr-substituted LaFeO_3 for water oxidation. <i>Journal of Materials Chemistry A</i> , 2018, 6, 22170-22178.	5.2	27
59	Spectroscopic Characterization of Aqua $[\text{Tc}(\text{CO})_3]^{3+}$ Complexes at High Ionic Strength. <i>Inorganic Chemistry</i> , 2018, 57, 6903-6912.	1.9	10
60	Layer-resolved band bending at the $\text{SrTiO}_3/\text{Ge}(001)$ interface. <i>Physical Review Materials</i> , 2018, 2, .	0.9	20
61	Electrically coupling complex oxides to semiconductors: A route to novel material functionalities. <i>Journal of Materials Research</i> , 2017, 32, 249-259.	1.2	14
62	The effects of core-level broadening in determining band alignment at the epitaxial $\text{SrTiO}_3(001)/\text{Ge}(001)$ heterojunction. <i>Applied Physics Letters</i> , 2017, 110, .	1.5	26
63	Measurement Error in Atomic-Scale Scanning Transmission Electron Microscopy Energy-Dispersive X-Ray Spectroscopy (STEM-EDS) Mapping of a Model Oxide Interface. <i>Microscopy and Microanalysis</i> , 2017, 23, 513-517.	0.2	22
64	Low-Dimensional Oxygen Vacancy Ordering and Diffusion in SrCrO_3 . <i>Journal of Physical Chemistry Letters</i> , 2017, 8, 1757-1763.	2.1	15
65	Manganese-calcium intermixing facilitates heteroepitaxial growth at the $\text{SrTiO}_3/\text{calcite-water}$ interface. <i>Chemical Geology</i> , 2017, 470, 152-163.	1.4	17
66	Oxidative Corrosion of the $\text{UO}_2(001)$ Surface by Nonclassical Diffusion. <i>Langmuir</i> , 2017, 33, 13189-13196.	1.6	12
67	Overall Water Splitting with Room-Temperature Synthesized NiFe Oxyfluoride Nanoporous Films. <i>ACS Catalysis</i> , 2017, 7, 8406-8412.	5.5	91
68	Structural and electrical properties of single crystalline SrZrO_3 epitaxially grown on Ge (001). <i>Journal of Applied Physics</i> , 2017, 122, 084102.	1.1	10
69	An all-perovskite $p-n$ junction based on transparent conducting $\text{La}_{1-x}\text{Sr}_x\text{CrO}_3$ epitaxial layers. <i>Applied Physics Letters</i> , 2017, 111, .	1.5	12
70	Quantifying small changes in uranium oxidation states using XPS of a shallow core level. <i>Physical Chemistry Chemical Physics</i> , 2017, 19, 30473-30480.	1.3	25
71	Electronic Structure and Band Alignment at the NiO and SrTiO_3 Heterojunctions. <i>ACS Applied Materials & Interfaces</i> , 2017, 9, 26549-26555.	4.0	65
72	Competing Pathways for Nucleation of the Double Perovskite Structure in the Epitaxial Synthesis of $\text{La}_2\text{MnNiO}_6$. <i>Chemistry of Materials</i> , 2016, 28, 3814-3822.	3.2	29

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73	Inorganic tin aluminophosphate nanocomposite for reductive separation of pertechnetate. <i>Environmental Science: Nano</i> , 2016, 3, 1003-1013.	2.2	24
74	Electron Transfer Governed Crystal Transformation of Tungsten Trioxide upon Li Ions Intercalation. <i>ACS Applied Materials & Interfaces</i> , 2016, 8, 24567-24572.	4.0	26
75	Iso-oriented monolayer La-MoO_3 (010) films epitaxially grown on SrTiO_3 (001). <i>Nanoscale</i> , 2016, 8, 3119-3124.	2.8	26
76	Hole-induced insulator-to-metal transition in La_2MoO_7 . <i>Physical Review Letters</i> , 2016, 116, 087401.	11.1	74
77	Perovskite LaCrO_3 as a New p -Type Transparent Conducting Oxide. <i>Advanced Materials</i> , 2015, 27, 5191-5195.	11.1	160
78	Dominance of Interface Chemistry over the Bulk Properties in Determining the Electronic Structure of Epitaxial Metal/Perovskite Oxide Heterojunctions. <i>Chemistry of Materials</i> , 2015, 27, 4093-4098.	3.2	4
79	Electronic and magnetic properties of epitaxial perovskite SrCrO_3 ($\delta \approx 0.1$). <i>Journal of Physics Condensed Matter</i> , 2015, 27, 245605.	0.7	11
80	Argon Cluster Sputtering Source for ToF-SIMS Depth Profiling of Insulating Materials: High Sputter Rate and Accurate Interfacial Information. <i>Journal of the American Society for Mass Spectrometry</i> , 2015, 26, 1283-1290.	1.2	24
81	Anticorrelation between Surface and Subsurface Point Defects and the Impact on the Redox Chemistry of TiO_2 (110). <i>ChemPhysChem</i> , 2015, 16, 313-321.	1.0	41
82	Crystallographic dependence of photocatalytic activity of WO_3 thin films prepared by molecular beam epitaxy. <i>Physical Chemistry Chemical Physics</i> , 2015, 17, 15119-15123.	1.3	32
83	Self-corrected sensors based on atomic absorption spectroscopy for atom flux measurements in molecular beam epitaxy. <i>Applied Physics Letters</i> , 2014, 104, .	1.5	10
84	Reflection high-energy electron diffraction beam-induced structural and property changes on WO_3 thin films. <i>Applied Physics Letters</i> , 2014, 105, .	1.5	12
85	Etalon-induced baseline drift and correction in atom flux sensors based on atomic absorption spectroscopy. <i>Applied Physics Letters</i> , 2014, 105, 163113.	1.5	5
86	Strain Accommodation by Facile WO_6 Octahedral Distortion and Tilting during WO_3 Heteroepitaxy on SrTiO_3 (001). <i>ACS Applied Materials & Interfaces</i> , 2014, 6, 14253-14258.	4.0	29
87	Reversible nano-structuring of SrCrO_3 through oxidation and reduction at low temperature. <i>Nature Communications</i> , 2014, 5, 4669.	5.8	60
88	Atomic Structure of the Anatase TiO_2 (001) Surface. <i>Journal of Physical Chemistry Letters</i> , 2013, 4, 2958-2963.	2.1	49
89	The Impacts of Cation Stoichiometry and Substrate Surface Quality on Nucleation, Structure, Defect Formation, and Intermixing in Complex Oxide Heteroepitaxy of LaCrO_3 on SrTiO_3 (001). <i>Advanced Functional Materials</i> , 2013, 23, 2953-2963.	7.8	48
90	Hydrogen reactivity on highly-hydroxylated TiO_2 (110) surfaces prepared via carboxylic acid adsorption and photolysis. <i>Physical Chemistry Chemical Physics</i> , 2012, 14, 3066-3074.	1.3	61

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91	In-situ imaging of the nucleation and growth of epitaxial anatase TiO ₂ (001) films on SrTiO ₃ (001). Surface Science, 2012, 606, 1443-1449.	0.8	27
92	Formation of single-phase BaO nanoclusters. Thin Solid Films, 2011, 519, 5335-5338.	0.8	5
93	Direct Observation of Site-Specific Molecular Chemisorption of O ₂ on TiO ₂ (110). Journal of Physical Chemistry Letters, 2010, 1, 3524-3529.	2.1	69
94	Water Interactions with Terminal Hydroxyls on TiO ₂ (110). Journal of Physical Chemistry C, 2010, 114, 17080-17084.	1.5	34
95	Formation of O adatom pairs and charge transfer upon O ₂ dissociation on reduced TiO ₂ (110). Physical Chemistry Chemical Physics, 2010, 12, 6337.	1.3	98
96	Adsorption states and mobility of trimethylacetic acid molecules on reduced TiO ₂ (110) surface. Physical Chemistry Chemical Physics, 2010, 12, 5986.	1.3	23
97	Imaging Consecutive Steps of O ₂ Reaction with Hydroxylated TiO ₂ (110): Identification of HO ₂ and Terminal OH Intermediates. Journal of Physical Chemistry C, 2009, 113, 666-671.	1.5	75
98	Water as a Catalyst: Imaging Reactions of O ₂ with Partially and Fully Hydroxylated TiO ₂ (110) Surfaces. Journal of Physical Chemistry C, 2009, 113, 1908-1916.	1.5	88
99	Chemical Reactivity of Reduced TiO ₂ (110): The Dominant Role of Surface Defects in Oxygen Chemisorption. Journal of Physical Chemistry C, 2009, 113, 12407-12411.	1.5	127
100	Reproducible tip fabrication and cleaning for UHV STM. Ultramicroscopy, 2008, 108, 873-877.	0.8	45
101	Transient Mobility of Oxygen Adatoms upon O ₂ Dissociation on Reduced TiO ₂ (110). Journal of Physical Chemistry C, 2008, 112, 2649-2653.	1.5	118
102	Intrinsic Diffusion of Hydrogen on Rutile TiO ₂ (110). Journal of the American Chemical Society, 2008, 130, 9080-9088.	6.6	124
103	Focused-ion-beam directed self-assembly of Cu ₂ O islands on SrTiO ₃ (100). Applied Physics Letters, 2004, 84, 5213-5215.	1.5	31