Rong Yu

List of Publications by Year
in descending order

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146 papers	8,816 citations	66343 42 h-index	43889 91 g-index
151 all docs	151 docs citations	151 times ranked	11429 citing authors

#	Article	IF	Citations
1	Ultrafine jagged platinum nanowires enable ultrahigh mass activity for the oxygen reduction reaction. Science, 2016, 354, 1414-1419.	12.6	1,292
2	Single-atom tailoring of platinum nanocatalysts for high-performance multifunctional electrocatalysis. Nature Catalysis, 2019, 2, 495-503.	34.4	464
3	Ultrathin rhodium nanosheets. Nature Communications, 2014, 5, 3093.	12.8	428
4	Tuning defects in oxides at roomÂtemperature by lithium reduction. Nature Communications, 2018, 9, 1302.	12.8	428
5	Isolated Single-Atom Pd Sites in Intermetallic Nanostructures: High Catalytic Selectivity for Semihydrogenation of Alkynes. Journal of the American Chemical Society, 2017, 139, 7294-7301.	13.7	354
6	Strain control and spontaneous phase ordering in vertical nanocomposite heteroepitaxial thin films. Nature Materials, 2008, 7, 314-320.	27.5	334
7	Single-atomic cobalt sites embedded in hierarchically ordered porous nitrogen-doped carbon as a superior bifunctional electrocatalyst. Proceedings of the National Academy of Sciences of the United States of America, 2018, 115, 12692-12697.	7.1	325
8	Rareâ€Earth Single Erbium Atoms for Enhanced Photocatalytic CO₂ Reduction. Angewandte Chemie - International Edition, 2020, 59, 10651-10657.	13.8	314
9	Carbon nitride supported Fe2 cluster catalysts with superior performance for alkene epoxidation. Nature Communications, 2018, 9, 2353.	12.8	278
10	Three-dimensional open nano-netcage electrocatalysts for efficient pH-universal overall water splitting. Nature Communications, 2019, 10, 4875.	12.8	253
11	Sophisticated Construction of Au Islands on Ptâ€“Ni: An Ideal Trimetallic Nanoframe Catalyst. Journal of the American Chemical Society, 2014, 136, 11594-11597.	13.7	216
12	Platinumâ€“nickel frame within metal-organic framework fabricated in situ for hydrogen enrichment and molecular sieving. Nature Communications, 2015, 6, 8248.	12.8	184
13	Calculations of single-crystal elastic constants made simple. Computer Physics Communications, 2010, 181, 671-675.	7.5	182
14	A Seedâ€Based Diffusion Route to Monodisperse Intermetallic CuAu Nanocrystals. Angewandte Chemie - International Edition, 2010, 49, 2917-2921.	13.8	167
15	Highly branched Ptâ€“Ni nanocrystals enclosed by stepped surface for methanol oxidation. Chemical Science, 2012, 3, 1925.	7.4	146
16	Lattice Strain Distributions in Individual Dealloyed Ptâ€“Fe Catalyst Nanoparticles. Journal of Physical Chemistry Letters, 2012, 3, 934-938.	4.6	124
17	Structure and interface chemistry of perovskite-spinel nanocomposite thin films. Applied Physics Letters, 2006, 89, 172902.	3.3	122
18	Elastic stability and electronic structure of pyrite type PtN2: A hard semiconductor. Applied Physics Letters, 2006, 88, 051913.	3.3	117

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19	Unveiling the charge transfer dynamics steered by built-in electric fields in BiOBr photocatalysts. Nature Communications, 2022, 13, 2230.	12.8	117
20	Crystal Structures of and Displacive Transitions in OsN2, IrN2, RuN2, and RhN2. Angewandte Chemie - International Edition, 2007, 46, 1136-1140.	13.8	116
21	Defect-Dominated Shape Recovery of Nanocrystals: A New Strategy for Trimetallic Catalysts. Journal of the American Chemical Society, 2013, 135, 12220-12223.	13.7	96
22	Platinum nitride with fluorite structure. Applied Physics Letters, 2005, 86, 121913.	3.3	94
23	Impact of carbon structure and morphology on the electrochemical performance of LiFePO4/C composites. Journal of Solid State Electrochemistry, 2008, 12, 995-1001.	2.5	90
24	Family of noble metal nitrides: First principles calculations of the elastic stability. Physical Review B, 2005, 72, .	3.2	81
25	Icosahedral Face-Centered Cubic Fe Nanoparticles: Facile Synthesis and Characterization with Aberration-Corrected TEM. Nano Letters, 2009, 9, 1572-1576.	9.1	80
26	Effects of Si and Al on twin boundary energy of TiC. Acta Materialia, 2003, 51, 2477-2484.	7.9	79
27	Thermal Wetting of Platinum Nanocrystals on Silica Surface. Journal of Physical Chemistry B, 2005, 109, 6940-6943.	2.6	75
28	Static and dynamic polar nanoregions in relaxor ferroelectric Ba(Ti<mml:math) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 50 407 Td (xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:msub><mml:mrow /><mml:	3.2	73
29	Si-induced twinning of TiC and formation of Ti3SiC2 platelets. Acta Materialia, 2002, 50, 4127-4135.	7.9	72
30	Proton-Transfer Mechanism in LaPO4. Journal of Physical Chemistry C, 2007, 111, 11003-11007.	3.1	71
31	Ultrathin Auâ€“Ag bimetallic nanowires with Coulomb blockade effects. Chemical Communications, 2011, 47, 5160.	4.1	69
32	One-Pot Protocol for Bimetallic Pt/Cu Hexapod Concave Nanocrystals with Enhanced Electrocatalytic Activity. Scientific Reports, 2013, 3, 1404.	3.3	68
33	Quantitative experimental determination of site-specific magnetic structures by transmitted electrons. Nature Communications, 2013, 4, 1395.	12.8	66
34	PdAg bimetallic electrocatalyst for highly selective reduction of CO2 with low COOH* formation energy and facile CO desorption. Nano Research, 2019, 12, 2866-2871.	10.4	61
35	Direct Subangstrom Measurement of Surfaces of Oxide Particles. Physical Review Letters, 2010, 105, 226101.	7.8	60
36	Atomic scale imaging of magnetic circular dichroism by achromatic electron microscopy. Nature Materials, 2018, 17, 221-225.	27.5	60

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37	Nitrogen-coordinated cobalt nanocrystals for oxidative dehydrogenation and hydrogenation of N-heterocycles. Chemical Science, 2019, 10, 5345-5352.	7.4	60
38	Formation of Hexagonal-Close Packed (HCP) Rhodium as a Size Effect. Journal of the American Chemical Society, 2017, 139, 575-578.	13.7	58
39	Microscopic model for the ferroelectric field effect in oxide heterostructures. Physical Review B, 2011, 84, .	3.2	51
40	Rareâ€Earth Single Erbium Atoms for Enhanced Photocatalytic CO₂ Reduction. Angewandte Chemie, 2020, 132, 10738-10744.	2.0	49
41	Undulating Slip in Laves Phase and Implications for Deformation in Brittle Materials. Physical Review Letters, 2011, 106, 165505.	7.8	46
42	Effect of W on structural stability of TiAl intermetallics and the site preference of W. Physical Review B, 2002, 65, .	3.2	44
43	Orientation relationship and interfacial structure between Î¶-Ti5Si3 precipitates and Î³-TiAl intermetallics. Acta Materialia, 2000, 48, 3701-3710.	7.9	42
44	Reversible Wurtziteâ€“Tetragonal Reconstruction in ZnO(10$ar 1$0) Surfaces. Angewandte Chemie - International Edition, 2012, 51, 7744-7747.	13.8	41
45	Influence of Stress and Orientation on Magnetoelectric Coupling of Pb(Zr,Ti)O3-CoFe2O4 Bilayer Films. Journal of the American Ceramic Society, 2011, 94, 1060-1066.	3.8	40
46	Polymorphism of Ti₃SiC₂. Journal of Materials Research, 2002, 17, 948-950.	2.6	36
47	Synthesis and characterization of mixed-morphology CePO4 nanoparticles. Journal of Solid State Chemistry, 2007, 180, 840-846.	2.9	35
48	Low-energy transmission electron diffraction and imaging of large-area graphene. Science Advances, 2017, 3, e1603231.	10.3	35
49	Structural stability and the alloying effect of TiB polymorphs in TiAl alloys. Intermetallics, 2017, 90, 97-102.	3.9	35
50	Visualization of Dopant Oxygen Atoms in a Bi₂Sr₂CaCu₂O₈₊_{Î´} Superconductor. Advanced Functional Materials, 2019, 29, 1903843.	14.9	34
51	Ultrathin CuO nanorods: controllable synthesis and superior catalytic properties in styrene epoxidation. Chemical Communications, 2015, 51, 8817-8820.	4.1	31
52	Proton transport paths in lanthanum phosphate electrolytes. Solid State Ionics, 2007, 178, 769-773.	2.7	29
53	B2 precipitates and distribution of W in a Tiâ€“47Alâ€“2Wâ€“0.5Si alloy. Intermetallics, 2002, 10, 661-665.	3.9	28
54	Topology of charge density and elastic anisotropy of Ti3SiC2 polymorphs. Journal of Materials Research, 2005, 20, 1180-1185.	2.6	28

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55	Practical Magnetic Pinning in YBCO. IEEE Transactions on Applied Superconductivity, 2009, 19, 3148-3151.	1.7	27
56	Subangstrom Profile Imaging of Relaxed ZnO(101Ì…0) Surfaces. Nano Letters, 2012, 12, 704-708.	9.1	25
57	Thermally Driven Interfacial Dynamics of Metal/Oxide Bilayer Nanoribbons. Small, 2005, 1, 858-865.	10.0	24
58	Competing Interfacial Reconstruction Mechanisms in La_{0.7}Sr_{0.3}MnO₃/SrTiO₃ Heterostructures. ACS Applied Materials & Interfaces, 2016, 8, 24192-24197.	8.0	24
59	On the orientation relationship between Ti5Si3 precipitates and B2 phase in a Ti-47Al-2W-0.5Si alloy. Scripta Materialia, 2001, 44, 911-916.	5.2	22
60	Stacking faults and grain boundaries of Ti 3 SiC 2. Philosophical Magazine Letters, 2003, 83, 325-331.	1.2	22
61	A new type of vanadium carbide V5C3 and its hardening by tuning Fermi energy. Scientific Reports, 2016, 6, 21794.	3.3	22
62	First-principles calculations of the effect of Pt on NiAl surface energy and the site preference of Pt. Applied Physics Letters, 2007, 91, .	3.3	21
63	Proton conduction and characterization of an La(PO3)3â€“Ca(PO3)2 glassâ€“ceramic. Solid State Ionics, 2008, 178, 1811-1816.	2.7	20
64	Palladium/tin bimetallic single-crystalline hollow nanospheres. Chemical Communications, 2012, 48, 1683-1685.	4.1	20
65	Prediction on technetium triboride from first-principles calculations. Solid State Communications, 2017, 252, 40-45.	1.9	20
66	Deep sub-angstrom resolution imaging by electron ptychography with misorientation correction. Science Advances, 2022, 8, eabn2275.	10.3	20
67	Elastic constants and tensile properties ofAl2OCby density functional calculations. Physical Review B, 2007, 75, .	3.2	19
68	Epitaxial growth of Fe3O4 (111) on SrTiO3 (001) substrates. Journal of Crystal Growth, 2008, 310, 5282-5286.	1.5	19
69	Atomic-scale study of topological vortex-like domain pattern in multiferroic hexagonal manganites. Applied Physics Letters, 2013, 103, 032901.	3.3	19
70	Strain Concentration at the Boundaries in 5-Fold Twins of Diamond and Silicon. ACS Applied Materials & Interfaces, 2017, 9, 4253-4258.	8.0	19
71	Microstructural characterization of Feâ€“N thin films. Thin Solid Films, 2002, 411, 225-228.	1.8	17
72	Addition of ferromagnetic CoFe2O4 to YBCO thin films for enhanced flux pinning. Physica C: Superconductivity and Its Applications, 2010, 470, S223-S224.	1.2	17

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73	Orientation-tuning in self-assembled heterostructures induced by a buffer layer. Nanoscale, 2014, 6, 5126-5131.	5.6	17
74	Crystal structure of and displacive phase transition in tungsten nitride WN. Journal of Alloys and Compounds, 2017, 722, 517-524.	5.5	17
75	Atomic layer reversal on CeO2 (100) surface. Science China Materials, 2017, 60, 903-908.	6.3	17
76	Reversible Structural Transition in Epitaxial Manganite Film. Physical Review Letters, 2002, 88, 196104.	7.8	16
77	Subsurface reconstruction and saturation of surface bonds. Science Bulletin, 2018, 63, 1570-1575.	9.0	16
78	Softest elastic mode governs materials hardness. Science Bulletin, 2014, 59, 1747-1754.	1.7	14
79	Direct Observation of Thickness Dependence of Ferroelectricity in Freestanding BaTiO₃ Thin Film. Journal of the American Ceramic Society, 2015, 98, 2710-2712.	3.8	14
80	Oxygen adatoms and vacancies on the (110) surface of CeO2. Science China Technological Sciences, 2018, 61, 135-139.	4.0	14
81	Effect of Oxygen Interstitial Ordering on Multiple Order Parameters in Rare Earth Ferrite. Physical Review Letters, 2019, 123, 247601.	7.8	13
82	Structure and Stability of the (001) Surface of Co₃O₄. Journal of Physical Chemistry C, 2020, 124, 25790-25795.	3.1	13
83	Atomic steps on the MgO(100) surface. Physical Review B, 2013, 87, .	3.2	12
84	Atomic Mechanism of Hybridization-Dependent Surface Reconstruction with Tailored Functionality in Hexagonal Multiferroics. ACS Applied Materials & Interfaces, 2017, 9, 27322-27331.	8.0	12
85	Large-area silica nanotubes with controllable geometry on silicon substrates. Applied Surface Science, 2009, 255, 3563-3566.	6.1	11
86	Ferroelectric polarization and domain walls in orthorhombic (K1âˆ'xNax)NbO3 lead-free ferroelectric ceramics. Applied Physics Letters, 2010, 96, .	3.3	11
87	Self-assembled perovskite-spinel heterostructure on a highly distorted substrate. Applied Physics Letters, 2013, 102, .	3.3	11
88	Structural and spin state transition in the polar NiO(1 1 1) surface. Applied Surface Science, 2020, 532, 147427.	6.1	11
89	Effective object planes for aberration-corrected transmission electron microscopy. Ultramicroscopy, 2012, 112, 15-21.	1.9	10
90	Engineering the surface of rutile TiO₂ nanoparticles with quantum pits towards excellent lithium storage. RSC Advances, 2016, 6, 66197-66203.	3.6	10

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91	Surface termination and stoichiometry of LaAlO3(001) surface studied by HRTEM. Micron, 2020, 137, 102919.	2.2	10
92	Flexible Cation Distribution for Stabilizing a Spinel Surface. Journal of Physical Chemistry C, 2020, 124, 16431-16438.	3.1	10
93	Effect of oxygen stoichiometry in LuFe₂O_{4â˜Î´}and its microstructure observed by aberration-corrected transmission electron microscopy. Journal of Physics Condensed Matter, 2012, 24, 435901.	1.8	9
94	Surface Structures of Mn₃O₄ and the Partition of Oxidation States of Mn. Journal of Physical Chemistry Letters, 2021, 12, 5675-5681.	4.6	9
95	Atomic-scale structure characteristics of antiferroelectric silver niobate. Applied Physics Letters, 2018, 113, .	3.3	8
96	Prediction of stable high-pressure structures of tantalum nitride TaN2. Journal of Materials Science and Technology, 2019, 35, 2297-2304.	10.7	8
97	Metal/ceramic interface in an in situsynthesized Ti/TiC_P composite coating by laser processing. Journal of Materials Research, 2001, 16, 9-12.	2.6	7
98	High temperature nitrogen annealing induced interstitial oxygen precipitation in silicon epitaxial layer on heavily arsenic-doped silicon wafer. Applied Physics Letters, 2006, 88, 242112.	3.3	7
99	Kinetical faceting of the low index W surfaces under electrical current. Surface Science, 2014, 625, 10-15.	1.9	7
100	Evaluation of stacking faults and associated partial dislocations in AlSb/GaAs (001) interface by aberration-corrected high-resolution transmission electron microscopy. AIP Advances, 2014, 4, .	1.3	7
101	Strengthening materials by changing the number of valence electrons. Computational Materials Science, 2017, 129, 252-258.	3.0	7
102	Atomic Heterointerfaces and Electrical Transportation Properties in Selfâ€Assembled LaNiO₃â€“NiO Heteroepitaxy. Advanced Materials Interfaces, 2018, 5, 1701202.	3.7	7
103	Atomic structures of high Miller index surfaces of NiO. Journal of Materials Chemistry C, 2020, 8, 14164-14171.	5.5	7
104	Metastable Ce-terminated (1 1 1) surface of ceria. Applied Surface Science, 2021, 546, 148972.	6.1	7
105	Microstructural study on multilayer [FeTaN/TaN]5 films. Materials Letters, 2003, 57, 3904-3909.	2.6	6
106	Early precipitation of Ni 2 (Cr,Mo) phase. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2014, 615, 1-6.	5.6	6
107	Deuterium ion irradiation induced precipitation in Feâ€“Cr alloy: Characterization and effects on irradiation behavior. Journal of Nuclear Materials, 2015, 459, 81-89.	2.7	6
108	Determination of the incommensurate modulated structure of Bi2Sr1.6La0.4CuO6+ by aberration-corrected transmission electron microscopy. Ultramicroscopy, 2015, 159, 67-72.	1.9	6

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109	Atomic Structure and Properties of SnO₂ (100) and (101) Surfaces and (301) Steps in the (100) Surface. Journal of Physical Chemistry C, 2020, 124, 27631-27636.	3.1	6
110	Atomic structure and properties of a perovskite/spinel (111) interface. Physical Review B, 2020, 102, .	3.2	6
111	Defect structures of the Cr₂O₃(112Ì„0) surface: effect of electron beam irradiation. Journal of Materials Chemistry C, 2021, 9, 6324-6331.	5.5	6
112	Controlling Strain Relaxation by Interface Design in Highly Lattice-Mismatched Heterostructure. Nano Letters, 2021, 21, 6867-6874.	9.1	6
113	Atomic structures of twin boundaries in CoO. Physical Chemistry Chemical Physics, 2021, 23, 25590-25596.	2.8	6
114	On the orientation relationship between a2precipitates and the B2 phase in a Ti-47at.%Al-2at.%W-0.5at.%Si alloy. Philosophical Magazine Letters, 2001, 81, 71-76.	1.2	5
115	The effect of doping Ag on the microstructure of La2/3Sr1/3MnO3 films. Journal of Materials Research, 2002, 17, 2712-2719.	2.6	5
116	A Power-aware and Range-free Localization Algorithm for Sensor Networks. , 2006, , .		5
117	Dynamic microscopic structures and dielectric response in the cubic-to-tetragonal phase transition for BaTiO3 studied by first-principles molecular dynamics simulation. Journal of Applied Physics, 2011, 109, .	2.5	5
118	Experimental measurements and theoretical calculations of the atomic structure of materials with subangstrom resolution and picometer precision. Science Bulletin, 2014, 59, 1719-1724.	1.7	5
119	Twin Boundary and Fivefold Twins in Nickel Oxide. Physica Status Solidi (B): Basic Research, 2021, 258, 2000377.	1.5	5
120	Robust Power-Aware Routing in Wireless Sensor Networks with Special Concern about Localization Error. , 2006, , .		4
121	Multishell Intermetallic Onions by Symmetrical Configuration of Ordered Domains. Physical Review Letters, 2010, 105, 225501.	7.8	4
122	Spontaneous orientation-tuning driven by the strain variation in self-assembled ZnO-SrRuO3 heteroepitaxy. Applied Physics Letters, 2015, 107, .	3.3	4
123	Orientation relationships and interfaces between NiAl and G-phase Ni16Hf6Si7. Materials Letters, 2001, 49, 25-28.	2.6	3
124	Impacts of Back Surface Conditions on the Behavior of Oxygen in Heavily Arsenic Doped Czochralski Silicon Wafers. Materials Research Society Symposia Proceedings, 2005, 864, 9181.	0.1	3
125	Superconductorâ€“ferromagnet nanocomposites created by co-deposition of niobium and dysprosium. Superconductor Science and Technology, 2009, 22, 075001.	3.5	3
126	A novel controllable synthesis of silica nanotube arrays with ultraviolet photoluminescence. Solid State Sciences, 2009, 11, 1252-1257.	3.2	3

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127	Enhanced stability of the strengthening phase Ni2(Cr,Mo) in Niâ€“Crâ€“Mo alloys by adjacent instability. Computational Materials Science, 2015, 109, 111-114.	3.0	3
128	Structure stabilization effect of configuration entropy in cubic WN. Physical Chemistry Chemical Physics, 2018, 20, 29243-29248.	2.8	3
129	Coherent Topotactic Interface between Corundum and Rutile Structures. Journal of Physical Chemistry C, 2019, 123, 534-540.	3.1	3
130	Atomic Structure of the Cu₂O(111) Surface: A Transmission Electron Microscopy and DFTâ€‰+â€‰U Study. Physica Status Solidi (B): Basic Research, 2021, 258, 2100185.	1.5	3
131	Comparative first-principles study of elastic constants of covalent and ionic materials with LDA, GGA, and meta-GGA functionals and the prediction of mechanical hardness. Science China Technological Sciences, 2021, 64, 2755-2761.	4.0	3
132	Displacement separation analysis from atomic-resolution images. Ultramicroscopy, 2022, 232, 113404.	1.9	3
133	Stabilization of the (1 1 1) surface of NiO and CoO by segregation of point defects. Applied Surface Science, 2022, 582, 152473.	6.1	3
134	Atomic structure and polarity compensation of BaTiO3(1â€‰1â€‰1) surface. Journal of Physics Condensed Matter, 2015, 27, 095901.	1.8	2
135	Bilayer MoS2 quantum dots with tunable magnetism and spin. AIP Advances, 2018, 8, 115103.	1.3	2
136	Hardening tungsten carbide by alloying elements with high work function. Acta Crystallographica Section B: Structural Science, Crystal Engineering and Materials, 2019, 75, 994-1002.	1.1	2
137	Polyhedron and Charge Ordering in Interfacial Reconstruction of a Hexagonal Ferrite/Sapphire Heterostructure. ACS Applied Materials & Interfaces, 2021, 13, 11489-11496.	8.0	2
138	Interstitial oxygen-related defects and current leakage in trench metal-oxide-semiconductor field-effect transistor on epiâ•As++ structure. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 2006, 24, 1238-1242.	2.1	1
139	Structural distortion and collinear-to-helical magnetism transition in rutile-type <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mrow><mml:mi>Fe</mml:mi><mml:msub><mml:mi mathvariant="normal">O</mml:mi><mml:mn>2</mml:mn></mml:msub></mml:mrow></mml:math>. Physical Review B, 2020, 102, .	3.2	1
140	Spontaneous ordering, strain control and mutlifunctionality in vertical nanocomposite heteroepitaxial films. , 2008, , .		0
141	Effective transference numbers and water incorporation in glassâ€“ceramic La(PO3)3â€“Ca(PO3)2 in oxidizing atmospheres. Solid State Ionics, 2012, 217, 34-39.	2.7	0
142	Core structures of <001> {110} edge dislocations in BaTiO3. AIP Advances, 2015, 5, 077172.	1.3	0
143	Roles of Oxygen Vacancy in Improper Ferroelectrics. Microscopy and Microanalysis, 2018, 24, 74-75.	0.4	0
144	Properties of stress-induced super tetragonal phase in epitaxial BiFeO3 thin film. Applied Physics Letters, 2021, 118, 242903.	3.3	0

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145	Halfâ€Metallic CoO 2 and Semiconducting NiO 2 at High Pressures. Physica Status Solidi (B): Basic Research, 0, , 2100233.	1.5	0
146	Two-band superconductivity through structural and electronic reconstruction on interface: YBa₂Cu₃O₇/LaAlO₃(001). Journal of Applied Physics, 2022, 131, 125303.	2.5	0