

# Sokrates T Pantelides

## List of Publications by Year in descending order

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411  
papers

25,055  
citations

7069

78  
h-index

8835

145  
g-index

417  
all docs

417  
docs citations

417  
times ranked

26337  
citing authors

#	ARTICLE	IF	CITATIONS
1	Vertical and in-plane heterostructures from WS <sub>2</sub> /MoS <sub>2</sub> monolayers. Nature Materials, 2014, 13, 1135-1142.	13.3	1,918
2	Atom-by-atom structural and chemical analysis by annular dark-field electron microscopy. Nature, 2010, 464, 571-574.	13.7	1,138
3	Defects Engineered Monolayer MoS <sub>2</sub> for Improved Hydrogen Evolution Reaction. Nano Letters, 2016, 16, 1097-1103.	4.5	1,015
4	First-Principles Calculation of Transport Properties of a Molecular Device. Physical Review Letters, 2000, 84, 979-982.	2.9	831
5	Room-temperature ferroelectricity in CuInP <sub>2</sub> S <sub>6</sub> ultrathin flakes. Nature Communications, 2016, 7, 12357.	5.8	637
6	Monolayer PtSe <sub>2</sub> , a New Semiconducting Transition-Metal-Dichalcogenide, Epitaxially Grown by Direct Selenization of Pt. Nano Letters, 2015, 15, 4013-4018.	4.5	560
7	Theory of hydrogen diffusion and reactions in crystalline silicon. Physical Review B, 1989, 39, 10791-10808.	1.1	494
8	Effect of nitric oxide annealing on the interface trap densities near the band edges in the 4H polytype of silicon carbide. Applied Physics Letters, 2000, 76, 1713-1715.	1.5	390
9	Probing excitonic states in suspended two-dimensional semiconductors by photocurrent spectroscopy. Scientific Reports, 2014, 4, 6608.	1.6	351
10	Microscopic Theory of Atomic Diffusion Mechanisms in Silicon. Physical Review Letters, 1984, 52, 1814-1817.	2.9	318
11	Fast kinetics of magnesium monochloride cations in interlayer-expanded titanium disulfide for magnesium rechargeable batteries. Nature Communications, 2017, 8, 339.	5.8	304
12	Atomic-resolution imaging of oxidation states in manganites. Physical Review B, 2009, 79, .	1.1	274
13	Long-range ferromagnetic ordering in manganese-doped two-dimensional dichalcogenides. Physical Review B, 2013, 88, .	1.1	271
14	p-type doping of MoS <sub>2</sub> thin films using Nb. Applied Physics Letters, 2014, 104, 092104.	1.5	268
15	MoS <sub>2</sub> /TiO <sub>2</sub> Edge-on Heterostructure for Efficient Photocatalytic Hydrogen Evolution. Advanced Energy Materials, 2016, 6, 1600464.	10.2	264
16	Synthesis and properties of free-standing monolayer amorphous carbon. Nature, 2020, 577, 199-203.	13.7	250
17	Two-dimensional GaSe/MoSe <sub>2</sub> misfit bilayer heterojunctions by van der Waals epitaxy. Science Advances, 2016, 2, e1501882.	4.7	239
18	Theory of Hydrogen Diffusion and Reactions in Crystalline Silicon. Physical Review Letters, 1988, 60, 2761-2764.	2.9	233

#	ARTICLE	IF	CITATIONS
19	Flexible metallic nanowires with self-adaptive contacts to semiconducting transition-metal dichalcogenide monolayers. <i>Nature Nanotechnology</i> , 2014, 9, 436-442.	15.6	228
20	The effect of intrinsic crumpling on the mechanics of free-standing graphene. <i>Nature Communications</i> , 2015, 6, 8789.	5.8	219
21	Direct observation of ferroelectric field effect and vacancy-controlled screening at the BiFeO <sub>3</sub> /La <sub>x</sub> Sr <sub>1-x</sub> MnO <sub>3</sub> interface. <i>Nature Materials</i> , 2014, 13, 1019-1025.	13.3	218
22	Control of Octahedral Tilts and Magnetic Properties of Perovskite Oxide Heterostructures by Substrate Symmetry. <i>Physical Review Letters</i> , 2010, 105, 227203.	2.9	211
23	Strong Phonon-Phonon Interactions Securing Extraordinary Thermoelectric Ge <sub>1-x</sub> Sb <sub>x</sub> Te with Zn-Alloying-Induced Band Alignment. <i>Journal of the American Chemical Society</i> , 2019, 141, 1742-1748.	6.6	199
24	Role of Defects in the Phase Transition of VO <sub>2</sub> Nanoparticles Probed by Plasmon Resonance Spectroscopy. <i>Nano Letters</i> , 2012, 12, 780-786.	4.5	196
25	Atomically localized plasmon enhancement in monolayer graphene. <i>Nature Nanotechnology</i> , 2012, 7, 161-165.	15.6	196
26	Bonding Arrangements at the Si <sup>+</sup> /SiO <sub>2</sub> and SiC <sup>+</sup> /SiO <sub>2</sub> Interfaces and a Possible Origin of their Contrasting Properties. <i>Physical Review Letters</i> , 2000, 84, 943-946.	2.9	186
27	Large Area and High Quality 2D Transition Metal Telluride. <i>Advanced Materials</i> , 2017, 29, 1603471.	11.1	181
28	Hydrogen and the Structure of the Transition Aluminas. <i>Journal of the American Chemical Society</i> , 1999, 121, 7493-7499.	6.6	179
29	Bonding at the SiC <sup>+</sup> /SiO <sub>2</sub> Interface and the Effects of Nitrogen and Hydrogen. <i>Physical Review Letters</i> , 2007, 98, 026101.	2.9	171
30	Interactions of Hydrogen with CeO <sub>2</sub> . <i>Journal of the American Chemical Society</i> , 2001, 123, 6609-6611.	6.6	167
31	Vacancy-Induced Formation and Growth of Inversion Domains in Transition-Metal Dichalcogenide Monolayer. <i>ACS Nano</i> , 2015, 9, 5189-5197.	7.3	167
32	Molecular Beam Epitaxy of Highly Crystalline Monolayer Molybdenum Disulfide on Hexagonal Boron Nitride. <i>Journal of the American Chemical Society</i> , 2017, 139, 9392-9400.	6.6	167
33	Rhenium-Doped and Stabilized MoS <sub>2</sub> Atomic Layers with Basal Plane Catalytic Activity. <i>Advanced Materials</i> , 2018, 30, e1803477.	11.1	164
34	Complex Dynamical Phenomena in Heavily Arsenic Doped Silicon. <i>Physical Review Letters</i> , 1996, 76, 4753-4756.	2.9	159
35	Defect Generation by Hydrogen at the Si-SiO <sub>2</sub> Interface. <i>Physical Review Letters</i> , 2001, 87, 165506.	2.9	159
36	Electronic and mechanical properties of planar and tubular boron structures. <i>Physical Review B</i> , 2005, 72, .	1.1	158

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37	Atomically precise, custom-design origami graphene nanostructures. <i>Science</i> , 2019, 365, 1036-1040.	6.0	156
38	Microscopic structure of the hydrogen-boron complex in crystalline silicon. <i>Physical Review B</i> , 1989, 39, 10809-10824.	1.1	152
39	Synthesis of Millimeter-Scale Transition Metal Dichalcogenides Single Crystals. <i>Advanced Functional Materials</i> , 2016, 26, 2009-2015.	7.8	152
40	Insulating Ferromagnetic $\text{LaCoO}_3$ A Phase Induced by Ordering of Oxygen Vacancies. <i>Physical Review Letters</i> , 2014, 112, .	2.4	141
41	Intrinsically patterned two-dimensional materials for selective adsorption of molecules and Nanoclusters. <i>Nature Materials</i> , 2017, 16, 717-721.	13.3	150
42	High Thermoelectric Performance in p-type Polycrystalline Cd-doped SnSe Achieved by a Combination of Cation Vacancies and Localized Lattice Engineering. <i>Advanced Energy Materials</i> , 2019, 9, 1803242.	10.2	150
43	Mechanisms of dopant impurity diffusion in silicon. <i>Physical Review B</i> , 1989, 40, 5484-5496.	1.1	148
44	Crown ethers in graphene. <i>Nature Communications</i> , 2014, 5, 5389.	5.8	142
45	Tunable quadruple-well ferroelectric van der Waals crystals. <i>Nature Materials</i> , 2020, 19, 43-48.	13.3	140
46	AC/AB Stacking Boundaries in Bilayer Graphene. <i>Nano Letters</i> , 2013, 13, 3262-3268.	4.5	137
47	Proton-Induced Dehydrogenation of Defects in AlGaIn/GaN HEMTs. <i>IEEE Transactions on Nuclear Science</i> , 2013, 60, 4080-4086.	1.2	136
48	First-principles calculations of electron mobilities in silicon: Phonon and Coulomb scattering. <i>Applied Physics Letters</i> , 2009, 94, .	1.5	129
49	Effect of hydrogen on shallow dopants in crystalline silicon. <i>Applied Physics Letters</i> , 1987, 50, 995-997.	1.5	125
50	Origin of Colossal Ionic Conductivity in Oxide Multilayers: Interface Induced Sublattice Disorder. <i>Physical Review Letters</i> , 2010, 104, 115901.	2.9	124
51	Ultrafast Phase Transition via Catastrophic Phonon Collapse Driven by Plasmonic Hot-Electron Injection. <i>Nano Letters</i> , 2014, 14, 1127-1133.	4.5	123
52	Role of the nanoscale in catalytic CO oxidation by supported Au and Pt nanostructures. <i>Physical Review B</i> , 2007, 76, .	1.1	122
53	Probing charge scattering mechanisms in suspended graphene by varying its dielectric environment. <i>Nature Communications</i> , 2012, 3, 734.	5.8	119
54	Dehydrogenation of defects and hot-electron degradation in GaN high-electron-mobility transistors. <i>Journal of Applied Physics</i> , 2011, 109, .	1.1	114

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55	Physical mechanisms of negative-bias temperature instability. Applied Physics Letters, 2005, 86, 142103.	1.5	113
56	Novel $\text{Pd}_2$ Two-Dimensional Phase Driven by Interlayer Fusion in Layered $\text{PdSe}$ Impurity-Induced Structural Transformation of a MgO Grain Boundary. Physical Review Letters, 2017, 119, 016101.	2.9	111
57	Impurity-Induced Structural Transformation of a MgO Grain Boundary. Physical Review Letters, 1998, 81, 3675-3678.	2.9	108
58	Structure and properties of hydrogen-impurity pairs in elemental semiconductors. Physical Review Letters, 1989, 62, 1884-1887.	2.9	107
59	Formation of Large Polysulfide Complexes during the Lithium-Sulfur Battery Discharge. Physical Review Applied, 2014, 2, .	1.5	105
60	Mo-Terminated Edge Reconstructions in Nanoporous Molybdenum Disulfide Film. Nano Letters, 2018, 18, 482-490.	4.5	105
61	Atomically sharp interface enabled ultrahigh-speed non-volatile memory devices. Nature Nanotechnology, 2021, 16, 882-887.	15.6	105
62	Direct visualization of reversible dynamics in a Si6 cluster embedded in a graphene pore. Nature Communications, 2013, 4, 1650.	5.8	104
63	H <sub>2</sub> O and O <sub>2</sub> molecules in amorphous SiO <sub>2</sub> : Defect formation and annihilation mechanisms. Physical Review B, 2004, 69, .	1.1	97
64	Temperature Measurement by a Nanoscale Electron Probe Using Energy Gain and Loss Spectroscopy. Physical Review Letters, 2018, 120, 095901.	2.9	97
65	Rapid and Nondestructive Identification of Polytypism and Stacking Sequences in Few-Layer Molybdenum Diselenide by Raman Spectroscopy. Advanced Materials, 2015, 27, 4502-4508.	11.1	96
66	The observation of square ice in graphene questioned. Nature, 2015, 528, E1-E2.	13.7	95
67	Direct Observation of Dopant Atom Diffusion in a Bulk Semiconductor Crystal Enhanced by a Large Size Mismatch. Physical Review Letters, 2014, 113, 155501.	2.9	91
68	Surface Reconstruction and the Difference in Surface Acidity between $\gamma$ - and $\delta$ -Alumina. Journal of the American Chemical Society, 2001, 123, 26-29.	6.6	90
69	<i>In Situ</i> Observation of Oxygen Vacancy Dynamics and Ordering in the Epitaxial LaCoO <sub>3</sub> System. ACS Nano, 2017, 11, 6942-6949.	7.3	89
70	Atomic-Scale Dynamics of the Formation and Dissolution of Carbon Clusters in SiO <sub>2</sub> . Physical Review Letters, 2001, 86, 5946-5949.	2.9	86
71	Sequence of Silicon Monolayer Structures Grown on a Ru Surface: from a Herringbone Structure to Silicene. Nano Letters, 2017, 17, 1161-1166.	4.5	86
72	Stable Silicene in Graphene/Silicene Van der Waals Heterostructures. Advanced Materials, 2018, 30, e1804650.	11.1	86

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73	Fowler-Nordheim hole tunneling in p-SiC/SiO <sub>2</sub> structures. Applied Physics Letters, 2000, 77, 2560-2562.	1.5	85
74	First-principles calculations of diffusion coefficients: Hydrogen in silicon. Physical Review Letters, 1990, 64, 1401-1404.	2.9	84
75	Effects of Applied Bias and High Field Stress on the Radiation Response of GaN/AlGa <sub>n</sub> HEMTs. IEEE Transactions on Nuclear Science, 2015, 62, 2423-2430.	1.2	84
76	Synthesis of Co-Doped MoS <sub>2</sub> Monolayers with Enhanced Valley Splitting. Advanced Materials, 2020, 32, e1906536.	11.1	84
77	Phase transformation mechanism between $\gamma$ - and $\delta$ -alumina. Physical Review B, 2003, 67, .	1.1	81
78	Defect-Mediated Phase Transformation in Anisotropic Two-Dimensional PdSe <sub>2</sub> Crystals for Seamless Electrical Contacts. Journal of the American Chemical Society, 2019, 141, 8928-8936.	6.6	81
79	Novel Defect Complexes and Their Role in the p-Type Doping of GaN. Physical Review Letters, 1999, 82, 1887-1890.	2.9	78
80	Structure and interaction of point defects in transition-metal nitrides. Physical Review B, 2007, 76, .	1.1	78
81	Stabilization of graphene nanopore. Proceedings of the National Academy of Sciences of the United States of America, 2014, 111, 7522-7526.	3.3	76
82	Atomic Configurations and Energetics of Arsenic Impurities in a Silicon Grain Boundary. Physical Review Letters, 1998, 81, 132-135.	2.9	75
83	Strain enhanced defect reactivity at grain boundaries in polycrystalline graphene. Carbon, 2011, 49, 3983-3988.	5.4	74
84	Oxygen complexes in silicon. Physical Review B, 1991, 43, 4208-4215.	1.1	73
85	Dopant Segregation at Semiconductor Grain Boundaries through Cooperative Chemical Rebonding. Physical Review Letters, 1996, 77, 1306-1309.	2.9	73
86	Increase in oxide hole trap density associated with nitrogen incorporation at the SiO <sub>2</sub> /SiC interface. Journal of Applied Physics, 2008, 103, .	1.1	69
87	Radiation-Induced Defect Evolution and Electrical Degradation of AlGa <sub>n</sub> /Ga <sub>n</sub> High-Electron-Mobility Transistors. IEEE Transactions on Nuclear Science, 2011, 58, 2918-2924.	1.2	69
88	Temperature Dependence and Postirradiation Annealing Response of the 1/f Noise of 4H-SiC MOSFETs. IEEE Transactions on Electron Devices, 2013, 60, 2361-2367.	1.6	69
89	Electronic Excitations in Graphene in the 1-50 eV Range: The $\Gamma$ and $\Gamma + \Gamma'$ Peaks Are Not Plasmons. Nano Letters, 2014, 14, 3827-3831.	4.5	69
90	Introduction of Interfacial Charges to Black Phosphorus for a Family of Planar Devices. Nano Letters, 2016, 16, 6870-6878.	4.5	69

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91	Locally Controlled Cu-Ion Transport in Layered Ferroelectric $\text{CuInP}_2\text{S}_6$ . ACS Applied Materials & Interfaces, 2018, 10, 27188-27194.	4.0	68
92	Controllable healing of defects and nitrogen doping of graphene by CO and NO molecules. Physical Review B, 2011, 83, .	1.1	67
93	Orbital-Occupancy versus Charge Ordering and the Strength of Electron Correlations in Electron-Doped $\text{CaMnO}_3$ . Physical Review Letters, 2007, 99, 036402.	2.9	66
94	THE BULK AND SURFACE STRUCTURE OF $\gamma$ -ALUMINA. Chemical Engineering Communications, 2000, 181, 107-135.	1.5	65
95	Identification of a major cause of endemically poor mobilities in SiC/SiO <sub>2</sub> structures. Applied Physics Letters, 2011, 98, 053507.	1.5	63
96	Theory of the Nucleation, Growth, and Structure of Hydrogen-Induced Extended Defects in Silicon. Physical Review Letters, 1999, 82, 4870-4873.	2.9	61
97	First-Principles Mobility Calculations and Atomic-Scale Interface Roughness in Nanoscale Structures. Physical Review Letters, 2005, 95, 106802.	2.9	61
98	Defects and doping and their role in functionalizing graphene. MRS Bulletin, 2012, 37, 1187-1194.	1.7	61
99	Coupled-Barrier Diffusion: The Case of Oxygen in Silicon. Physical Review Letters, 1996, 76, 267-270.	2.9	59
100	Electron Capture, Hydrogen Release, and Enhanced Gain Degradation in Linear Bipolar Devices. IEEE Transactions on Nuclear Science, 2008, 55, 2986-2991.	1.2	59
101	Defect-mediated ferromagnetism in insulating Co-doped anatase $\text{TiO}_2$ films. Physical Review B, 2008, 78, .	1.1	59
102	Direct Four-Probe Measurement of Grain-Boundary Resistivity and Mobility in Millimeter-Sized Graphene. Nano Letters, 2017, 17, 5291-5296.	4.5	59
103	A Quantitative Model for ELDRS and $\{m H\}_2$ Degradation Effects in Irradiated Oxides Based on First Principles Calculations. IEEE Transactions on Nuclear Science, 2011, 58, 2937-2944.	1.2	58
104	1/f Noise in GaN HEMTs grown under Ga-rich, N-rich, and NH <sub>3</sub> -rich conditions. Microelectronics Reliability, 2011, 51, 212-216.	0.9	58
105	Bias Dependence of Total Ionizing Dose Effects in SiGe-MOS FinFETs. IEEE Transactions on Nuclear Science, 2014, 61, 2834-2838.	1.2	57
106	Low-Energy X-ray and Ozone-Exposure Induced Defect Formation in Graphene Materials and Devices. IEEE Transactions on Nuclear Science, 2011, 58, 2961-2967.	1.2	56
107	Interface dipole between two metallic oxides caused by localized oxygen vacancies. Physical Review B, 2012, 86, .	1.1	56
108	Effects of anneals in ammonia on the interface trap density near the band edges in 4H-silicon carbide metal-oxide-semiconductor capacitors. Applied Physics Letters, 2000, 77, 3601-3603.	1.5	54

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109	Si/SiO <sub>2</sub> and SiC/SiO <sub>2</sub> Interfaces for MOSFETs – Challenges and Advances. Materials Science Forum, 2006, 527-529, 935-948.	0.3	54
110	Hydrogen in MOSFETs – A primary agent of reliability issues. Microelectronics Reliability, 2007, 47, 903-911.	0.9	54
111	Quantized conductance of multiwalled carbon nanotubes. Applied Physics Letters, 1999, 75, 3787-3789.	1.5	53
112	Atomic state and characterization of nitrogen at the SiC/SiO <sub>2</sub> interface. Journal of Applied Physics, 2014, 115, .	1.1	53
113	Structural Flexibility and Alloying in Ultrathin Transition-Metal Chalcogenide Nanowires. ACS Nano, 2016, 10, 2782-2790.	7.3	53
114	Ferroelectric-Gated InSe Photodetectors with High On/Off Ratios and Photoresponsivity. Nano Letters, 2020, 20, 6666-6673.	4.5	53
115	Substitutional doping of graphene: The role of carbon divacancies. Physical Review B, 2014, 89, .	1.1	52
116	Anisotropic Ordering in 1Tâ <sup>2</sup> Molybdenum and Tungsten Ditelluride Layers Alloyed with Sulfur and Selenium. ACS Nano, 2018, 12, 894-901.	7.3	52
117	Electrical-stress-induced degradation in AlGaN/GaN high electron mobility transistors grown under gallium-rich, nitrogen-rich, and ammonia-rich conditions. Applied Physics Letters, 2010, 96, .	1.5	50
118	Process Dependence of Proton-Induced Degradation in GaN HEMTs. IEEE Transactions on Nuclear Science, 2010, , .	1.2	49
119	Multiple Defects Cause Degradation After High Field Stress in AlGaN/GaN HEMTs. IEEE Transactions on Device and Materials Reliability, 2018, 18, 364-376.	1.5	49
120	Tunable Thermal Energy Transport across Diamond Membranes and Diamondâ€“Si Interfaces by Nanoscale Graphoepitaxy. ACS Applied Materials & Interfaces, 2019, 11, 18517-18527.	4.0	49
121	Migration, incorporation, and passivation reactions of molecular hydrogen at the Siâ€“SiO <sub>2</sub> interface. Physical Review B, 2004, 70, .	1.1	48
122	InSe/hBN/graphite heterostructure for high-performance 2D electronics and flexible electronics. Nano Research, 2020, 13, 1127-1132.	5.8	48
123	Piezoelectric domain walls in van der Waals antiferroelectric CuInP <sub>2</sub> Se <sub>6</sub> . Nature Communications, 2020, 11, 3623.	5.8	47
124	Giant negative electrostriction and dielectric tunability in a van der Waals layered ferroelectric. Physical Review Materials, 2019, 3, .	0.9	47
125	Negative bias-temperature instabilities in metalâ€“oxideâ€“silicon devices with SiO <sub>2</sub> and SiO <sub>x</sub> N <sub>y</sub> /HfO <sub>2</sub> gate dielectrics. Applied Physics Letters, 2004, 84, 4394-4396.	1.5	46
126	Large excitonic effects in group-IV sulfide monolayers. Physical Review B, 2015, 92, .	1.1	46



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127	Worst-Case Bias for Proton and 10-keV X-Ray Irradiation of AlGaIn/GaN HEMTs. IEEE Transactions on Nuclear Science, 2017, 64, 218-225.	1.2	46
128	Theory of hot-carrier-induced phenomena in GaN high-electron-mobility transistors. Applied Physics Letters, 2010, 96, .	1.5	45
129	Magnetic moment of a single vacancy in graphene and semiconducting nanoribbons. Physical Review B, 2012, 86, .	1.1	45
130	Role of Fe impurity complexes in the degradation of GaN/AlGaIn high-electron-mobility transistors. Applied Physics Letters, 2015, 106, .	1.5	45
131	Transport in molecular transistors: Symmetry effects and nonlinearities. Physical Review B, 2002, 66, .	1.1	44
132	Temperature-dependence and microscopic origin of low frequency 1/f noise in GaN/AlGaIn high electron mobility transistors. Applied Physics Letters, 2011, 99, .	1.5	44
133	Sulfur-doped graphene nanoribbons with a sequence of distinct band gaps. Nano Research, 2017, 10, 3377-3384.	5.8	44
134	Unsupported single-atom-thick copper oxide monolayers. 2D Materials, 2017, 4, 011001.	2.0	44
135	Simultaneous enhancement of electronic and Li+ ion conductivity in LiFePO4. Applied Physics Letters, 2012, 101, .	1.5	43
136	Super Large Sn <sup>2+</sup> Se Single Crystals with Excellent Thermoelectric Performance. ACS Applied Materials & Interfaces, 2019, 11, 8051-8059.	4.0	43
137	Oxygen Migration, Agglomeration, and Trapping: Key Factors for the Morphology of the Si <sup>3</sup> SiO <sub>2</sub> Interface. Physical Review Letters, 2006, 97, 116101.	2.9	42
138	Interface-induced multiferroism by design in complex oxide superlattices. Proceedings of the National Academy of Sciences of the United States of America, 2017, 114, E5062-E5069.	3.3	42
139	Wettability Alteration and Enhanced Oil Recovery Induced by Proximal Adsorption of $\text{Na}^+$ and $\text{Cl}^-$ Ions. ACS Applied Materials & Interfaces, 2019, 11, 8051-8059.	1.5	42
140	Spontaneous Formation of 1D Pattern in Monolayer VSe <sub>2</sub> with Dispersive Adsorption of Pt Atoms for HER Catalysis. Nano Letters, 2019, 19, 4897-4903.	4.5	42
141	Bonding Configurations and Collective Patterns of Ge Atoms Adsorbed on Si(111)-(7 $\times$ 7). Physical Review Letters, 2005, 94, 106101.	2.9	40
142	Hydrogen-Related Instabilities in MOS Devices Under Bias Temperature Stress. IEEE Transactions on Device and Materials Reliability, 2007, 7, 502-508.	1.5	40
143	Gate Bias Dependence of Defect-Mediated Hot-Carrier Degradation in GaN HEMTs. IEEE Transactions on Electron Devices, 2014, 61, 1316-1320.	1.6	40
144	Unified band-theoretic description of structural, electronic, and magnetic properties of vanadium dioxide phases. Physical Review B, 2017, 95, .	1.1	40

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145	Emergent interface vibrational structure of oxide superlattices. <i>Nature</i> , 2022, 601, 556-561.	13.7	40
146	Effects of Switched-bias Annealing on Charge Trapping in HfO <sub>2</sub> Gate Dielectrics. <i>IEEE Transactions on Nuclear Science</i> , 2006, 53, 3636-3643.	1.2	39
147	Introduction of nitrogen with controllable configuration into graphene via vacancies and edges. <i>Journal of Materials Chemistry A</i> , 2013, 1, 14927.	5.2	39
148	Ferromagnetism and perfect spin filtering in transition-metal-doped graphyne nanoribbons. <i>Physical Review B</i> , 2015, 92, .	1.1	39
149	Defects and Low-Frequency Noise in Irradiated Black Phosphorus MOSFETs With HfO <sub>2</sub> Gate Dielectrics. <i>IEEE Transactions on Nuclear Science</i> , 2018, 65, 1227-1238.	1.2	39
150	Reactions of Water Molecules in Silica-Based Network Glasses. <i>Physical Review Letters</i> , 2008, 100, 105503.	2.9	38
151	Morphology and defect properties of the Ge/GeO <sub>2</sub> interface. <i>Applied Physics Letters</i> , 2009, 95, .	1.5	38
152	Ozone-exposure and annealing effects on graphene-on-SiO <sub>2</sub> transistors. <i>Applied Physics Letters</i> , 2012, 101, .	1.5	38
153	Dislocation-driven growth of two-dimensional lateral quantum-well superlattices. <i>Science Advances</i> , 2018, 4, eaap9096.	4.7	38
154	Constructing Highly Porous Thermoelectric Monoliths with High-Performance and Improved Portability from Solution-Synthesized Shape-Controlled Nanocrystals. <i>Nano Letters</i> , 2018, 18, 4034-4039.	4.5	38
155	Effects of Bias on the Irradiation and Annealing Responses of 4H-SiC MOS Devices. <i>IEEE Transactions on Nuclear Science</i> , 2011, 58, 2925-2929.	1.2	37
156	The Effects of Proton-Defect Interactions on Radiation-Induced Interface-Trap Formation and Annealing. <i>IEEE Transactions on Nuclear Science</i> , 2012, 59, 3087-3092.	1.2	37
157	Origins of Low-Frequency Noise and Interface Traps in 4H-SiC MOSFETs. <i>IEEE Electron Device Letters</i> , 2013, 34, 117-119.	2.2	37
158	Origin of Pyroelectricity in Ferroelectric HfO <sub>2</sub> . <i>Physical Review Applied</i> , 2019, 12, .	1.5	37
159	Total Dose Radiation Response of Nitrided and Non-nitrided SiO <sub>2</sub> /4H-SiC MOS Capacitors. <i>IEEE Transactions on Nuclear Science</i> , 2006, 53, 3687-3692.	1.2	36
160	Tailoring Interface Structure in Highly Strained YSZ/STO Heterostructures. <i>Advanced Materials</i> , 2011, 23, 5268-5274.	11.1	36
161	Dual behavior of H <sup>+</sup> at Si/ SiO <sub>2</sub> interfaces: Mobility versus trapping. <i>Applied Physics Letters</i> , 2002, 81, 1839-1841.	1.5	35
162	Thermal donor formation processes in silicon and the catalytic role of hydrogen. <i>Applied Physics Letters</i> , 2006, 88, 051916.	1.5	35

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