

# Walt A De Heer

## List of Publications by Year in descending order

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120  
papers

40,960  
citations

22548

61  
h-index

30277

107  
g-index

120  
all docs

120  
docs citations

120  
times ranked

36702  
citing authors

#	ARTICLE	IF	CITATIONS
1	Highly Ordered Boron Nitride/Epigraphene Epitaxial Films on Silicon Carbide by Lateral Epitaxial Deposition. ACS Nano, 2020, 14, 12962-12971.	7.3	14
2	Flat and safe under the graphene sheet. Nature Materials, 2020, 19, 583-584.	13.3	12
3	Non-Invasive Nanoscale Potentiometry and Ballistic Transport in Epigraphene Nanoribbons. Nano Letters, 2020, 20, 3786-3790.	4.5	6
4	Microscopic origins of the terahertz carrier relaxation and cooling dynamics in graphene. Nature Communications, 2016, 7, 11617.	5.8	73
5	Nanoselective area growth of GaN by metalorganic vapor phase epitaxy on 4H-SiC using epitaxial graphene as a mask. Applied Physics Letters, 2016, 108, .	1.5	15
6	Microscopic Origins of the Terahertz Carrier Relaxation and Cooling Dynamics in Graphene. , 2015, , .		0
7	Unusual Temperature Dependence of Magnetization and Possible Magnetic Noncollinearity in Tm and Pr Clusters. Journal of Physical Chemistry C, 2015, 119, 11153-11159.	1.5	6
8	Atomic Structure of Epitaxial Graphene Sidewall Nanoribbons: Flat Graphene, Miniribbons, and the Confinement Gap. Nano Letters, 2015, 15, 182-189.	4.5	67
9	Measured atomic ground-state polarizabilities of 35 metallic elements. Physical Review A, 2015, 91, .	1.0	26
10	Scalable control of graphene growth on 4H-SiC C-face using decomposing silicon nitride masks. Journal Physics D: Applied Physics, 2015, 48, 152001.	1.3	7
11	Electronic cooling via interlayer Coulomb coupling in multilayer epitaxial graphene. Nature Communications, 2015, 6, 8105.	5.8	28
12	Terahertz Generation by Dynamical Photon Drag Effect in Graphene. , 2015, , .		0
13	Wafer bonding solution to epitaxial graphene-silicon integration. Journal Physics D: Applied Physics, 2014, 47, 094001.	1.3	13
14	Controlled epitaxial graphene growth within removable amorphous carbon corrals. Applied Physics Letters, 2014, 105, .	1.5	14
15	Exceptional ballistic transport in epitaxial graphene nanoribbons. Nature, 2014, 506, 349-354.	13.7	508
16	Local work function measurements of plasma-fluorinated epitaxial graphene. Applied Physics Letters, 2014, 104, .	1.5	21
17	Multiferroic Rhodium Clusters. Physical Review Letters, 2014, 113, 157203.	2.9	19
18	Planar Edge Schottky Barrier-Tunneling Transistors Using Epitaxial Graphene/SiC Junctions. Nano Letters, 2014, 14, 5170-5175.	4.5	25

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19	Electronic Cooling in Epitaxial and CVD Graphene. , 2014, , .		0
20	Chemically Engineered Graphene-Based 2D Organic Molecular Magnet. ACS Nano, 2013, 7, 10011-10022.	7.3	47
21	Record Maximum Oscillation Frequency in C-Face Epitaxial Graphene Transistors. Nano Letters, 2013, 13, 942-947.	4.5	145
22	Electronic Cooling in Multilayer Epitaxial Graphene. , 2013, , .		0
23	Epitaxial graphene on silicon carbide: Introduction to structured graphene. MRS Bulletin, 2012, 37, 1138-1147.	1.7	56
24	Structured epitaxial graphene: growth and properties. Journal Physics D: Applied Physics, 2012, 45, 154010.	1.3	36
25	Structured epitaxial graphene on SiC. , 2012, , .		1
26	Evidence for interlayer electronic coupling in multilayer epitaxial graphene from polarization-dependent coherently controlled photocurrent generation. Physical Review B, 2012, 85, .	1.1	19
27	Room-temperature Magnetic Ordering in Functionalized Graphene. Scientific Reports, 2012, 2, 624.	1.6	71
28	The invention of graphene electronics and the physics of epitaxial graphene on silicon carbide. Physica Scripta, 2012, T146, 014004.	1.2	13
29	Current relaxation due to hot carrier scattering in graphene. New Journal of Physics, 2012, 14, 105012.	1.2	39
30	Highly efficient spin transport in epitaxial graphene on SiC. Nature Physics, 2012, 8, 557-561.	6.5	392
31	Large area and structured epitaxial graphene produced by confinement controlled sublimation of silicon carbide. Proceedings of the National Academy of Sciences of the United States of America, 2011, 108, 16900-16905.	3.3	395
32	Nonperturbative Chemical Modification of Graphene for Protein Micropatterning. Langmuir, 2011, 27, 863-865.	1.6	85
33	Effect of Nitrophenyl Functionalization on the Magnetic Properties of Epitaxial Graphene. Small, 2011, 7, 1175-1180.	5.2	65
34	Hot carrier cooling by acoustic phonons in epitaxial graphene by ultrafast pump-probe spectroscopy. Physica Status Solidi C: Current Topics in Solid State Physics, 2011, 8, 1194-1197.	0.8	15
35	Metastability of Free Cobalt and Iron Clusters: A Possible Precursor to Bulk Ferromagnetism. Physical Review Letters, 2011, 107, 057203.	2.9	35
36	Enhanced photosensitivity of electro-oxidized epitaxial graphene. Applied Physics Letters, 2011, 98, .	1.5	21

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37	X-ray radiation effects in multilayer epitaxial graphene. <i>Applied Physics Letters</i> , 2011, 99, 232102.	1.5	13
38	Epitaxial graphene: A new electronic material for the 21st century. <i>MRS Bulletin</i> , 2011, 36, 632-639.	1.7	22
39	Spectroscopic Measurement of Interlayer Screening in Multilayer Epitaxial Graphene. <i>Physical Review Letters</i> , 2010, 104, 136802.	2.9	100
40	Top- and side-gated epitaxial graphene field effect transistors. <i>Physica Status Solidi (A) Applications and Materials Science</i> , 2010, 207, 286-290.	0.8	30
41	High-resolution tunnelling spectroscopy of a graphene quartet. <i>Nature</i> , 2010, 467, 185-189.	13.7	171
42	Real-space mapping of magnetically quantized graphene states. <i>Nature Physics</i> , 2010, 6, 811-817.	6.5	79
43	Coherent Control of Ballistic Photocurrents in Multilayer Epitaxial Graphene Using Quantum Interference. <i>Nano Letters</i> , 2010, 10, 1293-1296.	4.5	122
44	Epitaxial graphene electronic structure and transport. <i>Journal Physics D: Applied Physics</i> , 2010, 43, 374007.	1.3	119
45	Structural analysis of multilayer graphene via atomic moiré interferometry. <i>Physical Review B</i> , 2010, 81, .	1.1	146
46	Structured epitaxial graphene growth on SiC by selective graphitization using a patterned AlN cap. <i>Applied Physics Letters</i> , 2010, 96, 082112.	1.5	14
47	Epitaxial Graphenes on Silicon Carbide. <i>MRS Bulletin</i> , 2010, 35, 296-305.	1.7	180
48	Half integer quantum Hall effect in high mobility single layer epitaxial graphene. <i>Applied Physics Letters</i> , 2009, 95, .	1.5	140
49	Ultrafast dynamics and interlayer thermal coupling of hot carriers in epitaxial graphene. <i>Physica Status Solidi C: Current Topics in Solid State Physics</i> , 2009, 6, 470-473.	0.8	5
50	Chemical Modification of Epitaxial Graphene: Spontaneous Grafting of Aryl Groups. <i>Journal of the American Chemical Society</i> , 2009, 131, 1336-1337.	6.6	782
51	Observing the Quantization of Zero Mass Carriers in Graphene. <i>Science</i> , 2009, 324, 924-927.	6.0	431
52	Ultrafast Relaxation of Excited Dirac Fermions in Epitaxial Graphene. <i>Springer Series in Chemical Physics</i> , 2009, , 265-267.	0.2	0
53	Electron Pairing in Ferroelectric Niobium and Niobium Alloy Clusters. <i>Journal of Superconductivity and Novel Magnetism</i> , 2008, 21, 265-269.	0.8	12
54	Epitaxial Graphene Transistors on SiC Substrates. <i>IEEE Transactions on Electron Devices</i> , 2008, 55, 2078-2085.	1.6	387

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55	Dirac Particles in Epitaxial Graphene Films Grown on SiC. <i>Advances in Solid State Physics</i> , 2008, , 145-157.	0.8	25
56	Epitaxial-Graphene/Graphene-Oxide Junction: An Essential Step towards Epitaxial Graphene Electronics. <i>Physical Review Letters</i> , 2008, 101, 026801.	2.9	288
57	Ultrafast Relaxation of Excited Dirac Fermions in Epitaxial Graphene Using Optical Differential Transmission Spectroscopy. <i>Physical Review Letters</i> , 2008, 101, 157402.	2.9	427
58	Distribution of magnetization of a cold ferromagnetic cluster beam. <i>Physical Review B</i> , 2008, 78, .	1.1	29
59	Quenching of the Quantum Hall Effect in Multilayered Epitaxial Graphene: The Role of Undoped Planes. <i>Physical Review Letters</i> , 2008, 101, 116806.	2.9	12
60	Nonclassical dipoles in cold niobium clusters. <i>Physical Review B</i> , 2007, 75, .	1.1	18
61	Pionics: the Emerging Science and Technology of Graphene-based Nanoelectronics. , 2007, , .		20
62	Weak Antilocalization in Epitaxial Graphene: Evidence for Chiral Electrons. <i>Physical Review Letters</i> , 2007, 98, 136801.	2.9	316
63	Epitaxial graphene. <i>Solid State Communications</i> , 2007, 143, 92-100.	0.9	857
64	Magnetotransport in high mobility epitaxial graphene. <i>Physica Status Solidi (A) Applications and Materials Science</i> , 2007, 204, 1746-1750.	0.8	19
65	Electronic Confinement and Coherence in Patterned Epitaxial Graphene. <i>Science</i> , 2006, 312, 1191-1196.	6.0	5,140
66	Measurement of magnetic moments of freeBiNMnMclusters. <i>Physical Review B</i> , 2005, 72, .	1.1	38
67	Liquid Carbon, Carbon-Glass Beads, and the Crystallization of Carbon Nanotubes. <i>Science</i> , 2005, 307, 907-910.	6.0	86
68	Magnetic Moments and Adiabatic Magnetization of Free Cobalt Clusters. <i>Physical Review Letters</i> , 2005, 95, 237209.	2.9	163
69	Spin Uncoupling in Free Nb Clusters: Support for Nascent Superconductivity. <i>Physical Review Letters</i> , 2004, 93, 086803.	2.9	54
70	Nanotubes and the Pursuit of Applications. <i>MRS Bulletin</i> , 2004, 29, 281-285.	1.7	150
71	Ultrathin Epitaxial Graphite: 2D Electron Gas Properties and a Route toward Graphene-based Nanoelectronics. <i>Journal of Physical Chemistry B</i> , 2004, 108, 19912-19916.	1.2	3,179
72	Ferroelectricity in Free Niobium Clusters.. <i>ChemInform</i> , 2003, 34, no.	0.1	0

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73	Ferroelectricity in Free Niobium Clusters. <i>Science</i> , 2003, 300, 1265-1269.	6.0	130
74	In situ imaging of field emission from individual carbon nanotubes and their structural damage. <i>Applied Physics Letters</i> , 2002, 80, 856-858.	1.5	183
75	Room Temperature Ballistic Conduction in Carbon Nanotubes. <i>Journal of Physical Chemistry B</i> , 2002, 106, 12104-12118.	1.2	231
76	Structure and transport in nanotubes. <i>Nature Materials</i> , 2002, 1, 153-154.	13.3	7
77	Carbon Nanotubes--the Route Toward Applications. <i>Science</i> , 2002, 297, 787-792.	6.0	9,458
78	Confinement and Size Effects in Free Metal Clusters. <i>Springer Series in Cluster Physics</i> , 2000, , 1-35.	0.3	8
79	Optical Response of Carbon Nanotubes. , 1999, , 89-106.		2
80	Electrostatic Deflections and Electromechanical Resonances of Carbon Nanotubes. <i>Science</i> , 1999, 283, 1513-1516.	6.0	1,790
81	Recent developments in carbon nanotubes. <i>Current Opinion in Solid State and Materials Science</i> , 1999, 4, 355-359.	5.6	14
82	Conducting forms of Carbon. , 1999, , 390-439.		0
83	Field emission properties of multiwalled carbon nanotubes. <i>Ultramicroscopy</i> , 1998, 73, 7-15.	0.8	244
84	Carbon Nanotube Quantum Resistors. <i>Science</i> , 1998, 280, 1744-1746.	6.0	1,904
85	Field-Emission-Induced Luminescence from Carbon Nanotubes. <i>Physical Review Letters</i> , 1998, 81, 1441-1444.	2.9	150
86	Field emission from single-wall carbon nanotube films. <i>Applied Physics Letters</i> , 1998, 73, 918-920.	1.5	674
87	Hall effect and magnetoresistance of carbon nanotube films. <i>Physical Review B</i> , 1997, 55, 6704-6707.	1.1	87
88	Magnetism of Fe, Co and Ni clusters in molecular beams. <i>Journal of Magnetism and Magnetic Materials</i> , 1997, 168, 64-84.	1.0	212
89	Electron field emitters based on carbon nanotube films. <i>Advanced Materials</i> , 1997, 9, 87-89.	11.1	179
90	Purification and size-selection of carbon nanotubes. <i>Advanced Materials</i> , 1997, 9, 827-831.	11.1	277

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91	ESR study of potassium-doped aligned carbon nanotubes. Physical Review B, 1996, 53, 13996-13999.	1.1	32
92	Magnetic anisotropies of aligned carbon nanotubes. Physical Review B, 1995, 52, R6963-R6966.	1.1	123
93	Aligned Carbon Nanotube Films: Production and Optical and Electronic Properties. Science, 1995, 268, 845-847.	6.0	706
94	Magnetic properties of small iron systems: from ferromagnetic resonance of precipitated particles in silica to Stern-Gerlach deflections in molecular beam. Journal of Non-Crystalline Solids, 1994, 179, 316-323.	1.5	19
95	Magnetic Properties of Small Transition Metal Clusters in a Molecular Beam. , 1994, , 9-19.		1
96	Carbon anions produced by heat treatment of carbon soot and their relation to the 217.5 nm interstellar absorption feature. Chemical Physics Letters, 1993, 207, 480-486.	1.2	303
97	Magnetic properties of iron clusters in a molecular beam: resolution of a controversy. Zeitschrift für Physik D-Atoms Molecules and Clusters, 1993, 26, 325-327.	1.0	22
98	The physics of simple metal clusters: experimental aspects and simple models. Reviews of Modern Physics, 1993, 65, 611-676.	16.4	2,739
99	Magnetic moments of iron clusters with 25 to 700 atoms and their dependence on temperature. Physical Review Letters, 1993, 71, 4067-4070.	2.9	424
100	Large ion volume time-of-flight mass spectrometer with position and velocity sensitive detection capabilities for cluster beams. Review of Scientific Instruments, 1991, 62, 670-677.	0.6	105
101	Relative thermometer for neutral clusters produced in laser-vaporization sources. Physical Review B, 1991, 44, 8346-8348.	1.1	30
102	Photoabsorption spectra of sodium clusters. Physical Review B, 1991, 43, 4565-4572.	1.1	204
103	Surface and crystal field effects on the metallic properties of small systems. Physica Scripta, 1991, T35, 150-153.	1.2	0
104	Comment on "Photoionization of mass-selected $K_n^+$ ions: A test for the ionization scaling law $I \propto n^2$ ". Physical Review Letters, 1990, 65, 3356-3356.	2.9	28
105	Experimental and theoretical electric dipole polarizabilities of Al and Al <sub>2</sub> . Physical Review A, 1990, 42, 5150-5154.	1.0	43
106	Spin relaxation in small free iron clusters. Physical Review Letters, 1990, 65, 488-491.	2.9	333
107	Surface plasma resonances in free metal clusters. Physical Review B, 1989, 40, 5417-5427.	1.1	268
108	Nonjellium-to-jellium transition in aluminum cluster polarizabilities. Physical Review Letters, 1989, 63, 2834-2836.	2.9	156

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109	Collective dipole oscillations in small sodium clusters. Physical Review Letters, 1987, 59, 1805-1808.	2.9	323
110	Electronic Shell Structure and Metal Clusters. Solid State Physics, 1987, 40, 93-181.	1.3	407
111	Physics of metal clusters. The Journal of Physical Chemistry, 1987, 91, 3141-3149.	2.9	148
112	Alkali metal clusters and the jellium model. Chemical Physics Letters, 1987, 134, 1-5.	1.2	73
113	Spectroscopy of metal clusters. Lecture Notes in Physics, 1987, , 15-24.	0.3	2
114	Shell structure and response properties of metal clusters. Zeitschrift für Physik D-Atoms Molecules and Clusters, 1986, 3, 109-114.	1.0	69
115	Shell Structure and Response Properties of Metal Clusters. , 1986, , 9-14.		1
116	Electronic shell structure in potassium clusters. Solid State Communications, 1985, 53, 445-446.	0.9	171
117	Photoionization and shell structure of potassium clusters. Physical Review B, 1985, 32, 1366-1368.	1.1	192
118	Polarizability of alkali clusters. Physical Review B, 1985, 31, 2539-2540.	1.1	367
119	Electronic Shell Structure and Abundances of Sodium Clusters. Physical Review Letters, 1984, 52, 2141-2143.	2.9	2,227
120	Electronic Shell Structure and Abundances of Sodium Clusters. Physical Review Letters, 1984, 53, 510-510.	2.9	31