

# Alexander GrÃ¼neis

## List of Publications by Year in descending order

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134  
papers

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41344

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87  
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135  
all docs

135  
docs citations

135  
times ranked

9163  
citing authors

#	ARTICLE	IF	CITATIONS
1	Nitrogen-Doped Graphene: Efficient Growth, Structure, and Electronic Properties. Nano Letters, 2011, 11, 5401-5407.	9.1	685
2	Tunable Band Gap in Hydrogenated Quasi-Free-Standing Graphene. Nano Letters, 2010, 10, 3360-3366.	9.1	297
3	Graphene Epitaxy by Chemical Vapor Deposition on SiC. Nano Letters, 2011, 11, 1786-1791.	9.1	296
4	Determination of SWCNT diameters from the Raman response of the radial breathing mode. European Physical Journal B, 2001, 22, 307-320.	1.5	260
5	Inhomogeneous optical absorption around the K point in graphite and carbon nanotubes. Physical Review B, 2003, 67, .	3.2	257
6	Tight-binding description of the quasiparticle dispersion of graphite and few-layer graphene. Physical Review B, 2008, 78, .	3.2	243
7	Double resonance Raman spectroscopy of single-wall carbon nanotubes. New Journal of Physics, 2003, 5, 157-157.	2.9	229
8	Resonance Raman spectroscopy (n,m)-dependent effects in small-diameter single-wall carbon nanotubes. Physical Review B, 2005, 71, .	3.2	225
9	Tunable hybridization between electronic states of graphene and a metal surface. Physical Review B, 2008, 77, .	3.2	191
10	Family behavior of the optical transition energies in single-wall carbon nanotubes of smaller diameters. Applied Physics Letters, 2004, 85, 5703-5705.	3.3	185
11	A Catalytic Reaction Inside a Single-Walled Carbon Nanotube. Advanced Materials, 2008, 20, 1443-1449.	21.0	178
12	Dynamics of graphene growth on a metal surface: a time-dependent photoemission study. New Journal of Physics, 2009, 11, 073050.	2.9	173
13	Stokes and anti-Stokes double resonance Raman scattering in two-dimensional graphite. Physical Review B, 2002, 66, .	3.2	152
14	Photoluminescence intensity of single-wall carbon nanotubes. Carbon, 2006, 44, 873-879.	10.3	151
15	Double resonant Raman phenomena enhanced by van Hove singularities in single-wall carbon nanotubes. Physical Review B, 2002, 65, .	3.2	143
16	On the Graphitization Nature of Oxides for the Formation of Carbon Nanostructures. Chemistry of Materials, 2007, 19, 4105-4107.	6.7	121
17	Origin of the 2450 cm <sup>-1</sup> Raman bands in HOPG, single-wall and double-wall carbon nanotubes. Carbon, 2005, 43, 1049-1054.	10.3	120
18	Tailoring N-Doped Single and Double Wall Carbon Nanotubes from a Nondiluted Carbon/Nitrogen Feedstock. Journal of Physical Chemistry C, 2007, 111, 2879-2884.	3.1	119

#	ARTICLE	IF	CITATIONS
19	The Concept of Cutting Lines in Carbon Nanotube Science. Journal of Nanoscience and Nanotechnology, 2003, 3, 431-458.	0.9	115
20	Observation of a universal donor-dependent vibrational mode in graphene. Nature Communications, 2014, 5, 3257.	12.8	114
21	Optical absorption matrix elements in single-wall carbon nanotubes. Carbon, 2004, 42, 3169-3176.	10.3	104
22	Quasifreestanding single-layer hexagonal boron nitride as a substrate for graphene synthesis. Physical Review B, 2010, 82, .	3.2	104
23	Electron-Electron Correlation in Graphite: A Combined Angle-Resolved Photoemission and First-Principles Study. Physical Review Letters, 2008, 100, 037601.	7.8	103
24	Determination of two-dimensional phonon dispersion relation of graphite by Raman spectroscopy. Physical Review B, 2002, 65, .	3.2	99
25	Stokes and anti-Stokes Raman spectra of small-diameter isolated carbon nanotubes. Physical Review B, 2004, 69, .	3.2	98
26	Thermal Decomposition of Ferrocene as a Method for Production of Single-Walled Carbon Nanotubes without Additional Carbon Sources. Journal of Physical Chemistry B, 2006, 110, 20973-20977.	2.6	96
27	Evidence for a New Two-Dimensional C <sub>4</sub> -Type Polymer Based on Hydrogenated Graphene. Advanced Materials, 2011, 23, 4497-4503.	21.0	90
28	Phonon surface mapping of graphite: Disentangling quasi-degenerate phonon dispersions. Physical Review B, 2009, 80, .	3.2	83
29	Observation of Single-Spin Dirac Fermions at the Graphene/Ferromagnet Interface. Nano Letters, 2015, 15, 2396-2401.	9.1	82
30	Electronic structure and electron-phonon coupling of doped graphene layers in $KC_8$ . Physical Review B, 2009, 79, .	3.2	81
31	Fine tuning the charge transfer in carbon nanotubes via the interconversion of encapsulated molecules. Physical Review B, 2008, 77, .	3.2	79
32	Effect of nematic ordering on electronic structure of FeSe. Scientific Reports, 2016, 6, 36834.	3.3	78
33	Interband optical transitions in left- and right-handed single-wall carbon nanotubes. Physical Review B, 2004, 69, .	3.2	77
34	Intensity of the resonance Raman excitation spectra of single-wall carbon nanotubes. Physical Review B, 2005, 71, .	3.2	75
35	Making Graphene Nanoribbons Photoluminescent. Nano Letters, 2017, 17, 4029-4037.	9.1	73
36	Angle-resolved photoemission study of the graphite intercalation compound KC <sub>8</sub> : A key to graphene. Physical Review B, 2009, 80, .	3.2	69

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37	The Chemistry of Imperfections in N-Graphene. Nano Letters, 2014, 14, 4982-4988.	9.1	69
38	Electron-phonon interaction and relaxation time in graphite. Chemical Physics Letters, 2004, 392, 383-389.	2.6	68
39	A one step approach to B-doped single-walled carbon nanotubes. Journal of Materials Chemistry, 2008, 18, 5676.	6.7	68
40	High quality double wall carbon nanotubes with a defined diameter distribution by chemical vapor deposition from alcohol. Carbon, 2006, 44, 3177-3182.	10.3	66
41	Dispersive Raman spectra observed in graphite and single wall carbon nanotubes. Physica B: Condensed Matter, 2002, 323, 100-106.	2.7	64
42	Phonon Trigonal Warping Effect in Graphite and Carbon Nanotubes. Physical Review Letters, 2003, 90, 027403.	7.8	62
43	Strain-Induced Interference Effects on the Resonance Raman Cross Section of Carbon Nanotubes. Physical Review Letters, 2005, 95, 217403.	7.8	61
44	Catalyst Volume to Surface Area Constraints for Nucleating Carbon Nanotubes. Journal of Physical Chemistry B, 2007, 111, 8234-8241.	2.6	59
45	Influence of the Catalyst Hydrogen Pretreatment on the Growth of Vertically Aligned Nitrogen-Doped Carbon Nanotubes. Chemistry of Materials, 2007, 19, 6131-6137.	6.7	56
46	Photoexcited electron relaxation processes in single-wall carbon nanotubes. Physical Review B, 2005, 71, .	3.2	55
47	Origin of the Fine Structure of the Raman DBand in Single-Wall Carbon Nanotubes. Physical Review Letters, 2003, 90, 157401.	7.8	52
48	Isotope-Engineered Single-Wall Carbon Nanotubes; A Key Material for Magnetic Studies. Journal of Physical Chemistry C, 2007, 111, 4094-4098.	3.1	50
49	Direct observation of a dispersionless impurity band in hydrogenated graphene. Physical Review B, 2011, 83, .	3.2	49
50	Controlled assembly of graphene-capped nickel, cobalt and iron silicides. Scientific Reports, 2013, 3, 2168.	3.3	49
51	Optical absorption of graphite and single-wall carbon nanotubes. Applied Physics A: Materials Science and Processing, 2004, 78, 1099-1105.	2.3	47
52	Experimental and computational insight into the properties of the lattice-mismatched structures: Monolayers of $h$ -BN and graphene on Ir(111). Physical Review B, 2012, 86, .	3.2	46
53	Control of the single-wall carbon nanotube mean diameter in sulphur promoted aerosol-assisted chemical vapour deposition. Carbon, 2007, 45, 55-61.	10.3	45
54	Evolution of electronic structure of few-layer phosphorene from angle-resolved photoemission spectroscopy of black phosphorous. Physical Review B, 2016, 94, .	3.2	44

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55	Environmental Control of Charge Density Wave Order in Monolayer 2H-TaS <sub>2</sub> . ACS Nano, 2019, 13, 10210-10220.	14.6	44
56	Quasi-two-dimensional thermoelectricity in SnSe. Physical Review B, 2018, 97, .	3.2	42
57	High-Quality Double-Walled Carbon Nanotubes Grown by a Cold-Walled Radio Frequency Chemical Vapor Deposition Process. Chemistry of Materials, 2008, 20, 3466-3472.	6.7	41
58	Anisotropic Eliashberg function and electron-phonon coupling in doped graphene. Physical Review B, 2013, 88, .	3.2	41
59	Kinetic Isotope Effect in the Hydrogenation and Deuteration of Graphene. Advanced Functional Materials, 2013, 23, 1628-1635.	14.9	38
60	Field-Effect Transistors Based on Networks of Highly Aligned, Chemically Synthesized <i>N</i> = 7 Armchair Graphene Nanoribbons. ACS Applied Materials & Interfaces, 2018, 10, 9900-9903.	8.0	38
61	Boron-Doped Graphene Nanoribbons: Electronic Structure and Raman Fingerprint. ACS Nano, 2018, 12, 7571-7582.	14.6	38
62	Revealing the Small-Bundle Internal Structure of Vertically Aligned Single-Walled Carbon Nanotube Films. Journal of Physical Chemistry C, 2007, 111, 17861-17864.	3.1	37
63	Effects of the reaction atmosphere composition on the synthesis of single and multiwalled nitrogen-doped nanotubes. Journal of Chemical Physics, 2007, 127, 184709.	3.0	36
64	Semiconductor-Metal Transition and Quasiparticle Renormalization in Doped Graphene Nanoribbons. Advanced Electronic Materials, 2017, 3, 1600490.	5.1	33
65	Direct observation of a surface resonance state and surface band inversion control in black phosphorus. Physical Review B, 2018, 97, .	3.2	33
66	Charge density wave phase of $VSe_2$ . Physical Review B, 2019, 99, .	3.2	33
67	Oxygen Reduction by Lithiated Graphene and Graphene-Based Materials. ACS Nano, 2015, 9, 320-326.	14.6	28
68	Origin of the Flat Band in Heavily Cs-Doped Graphene. ACS Nano, 2020, 14, 1055-1069.	14.6	28
69	Resonant Raman spectra of carbon nanotube bundles observed by perpendicularly polarized light. Chemical Physics Letters, 2004, 387, 301-306.	2.6	27
70	Eutectic limit for the growth of carbon nanotubes from a thin iron film by chemical vapor deposition of cyclohexane. Chemical Physics Letters, 2006, 425, 301-305.	2.6	24
71	Chemical vapor deposition of functionalized single-walled carbon nanotubes with defined nitrogen doping. Physica Status Solidi (B): Basic Research, 2007, 244, 4051-4055.	1.5	24
72	Probing Local Hydrogen Impurities in Quasi-Free-Standing Graphene. ACS Nano, 2012, 6, 10590-10597.	14.6	24

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73	Atomically precise semiconductor-graphene and hBN interfaces by Ge intercalation. Scientific Reports, 2015, 5, 17700.	3.3	24
74	Effect of lithium doping on the optical properties of monolayer MoS <sub>2</sub> . Applied Physics Letters, 2018, 112, .	3.3	23
75	Narrow photoluminescence and Raman peaks of epitaxial MoS <sub>2</sub> on graphene/Ir(111). 2D Materials, 2019, 6, 011006.	4.4	23
76	Finding the hidden valence band of Na <sub>7</sub> armchair graphene nanoribbons with angle-resolved photoemission spectroscopy. 2D Materials, 2018, 5, 035007.	4.4	22
77	Tunneling current modulation in atomically precise graphene nanoribbon heterojunctions. Nature Communications, 2021, 12, 2542.	12.8	22
78	First and Second-Order Resonance Raman Process in Graphite and Single Wall Carbon Nanotubes. Japanese Journal of Applied Physics, 2002, 41, 4878-4882.	1.5	21
79	First-principles and angle-resolved photoemission study of lithium doped metallic black phosphorous. 2D Materials, 2016, 3, 025031.	4.4	21
80	Novel catalysts for low temperature synthesis of single wall carbon nanotubes. Physica Status Solidi (B): Basic Research, 2006, 243, 3101-3105.	1.5	20
81	Tunable Interface Properties between Pentacene and Graphene on the SiC Substrate. Journal of Physical Chemistry C, 2013, 117, 3969-3975.	3.1	19
82	Electronic properties of hydrogenated quasi-free-standing graphene. Physica Status Solidi (B): Basic Research, 2011, 248, 2639-2643.	1.5	17
83	Reversible crystalline-to-amorphous phase transformation in monolayer MoS <sub>2</sub> under grazing ion irradiation. 2D Materials, 2020, 7, 025005.	4.4	17
84	Efficient gating of epitaxial boron nitride monolayers by substrate functionalization. Physical Review B, 2015, 92, .	3.2	16
85	Electron-phonon coupling in graphene placed between magnetic Li and Si layers on cobalt. Physical Review B, 2018, 97, .	3.2	16
86	Resonance Raman Spectrum of Doped Epitaxial Graphene at the Lifshitz Transition. Nano Letters, 2018, 18, 6045-6056.	9.1	16
87	Comprehensive tunneling spectroscopy of quasifreestanding $\text{MoS}_2$ on graphene on Ir(111). Physical Review B, 2019, 99, .		
88	Effect of hydrogen adsorption on the quasiparticle spectra of graphene. Physical Review B, 2011, 83, .	3.2	15
89	Photodetection Using Atomically Precise Graphene Nanoribbons. ACS Applied Nano Materials, 2020, 3, 8343-8351.	5.0	15
90	Photothermal Bottom-up Graphene Nanoribbon Growth Kinetics. Nano Letters, 2020, 20, 4761-4767.	9.1	15

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91	Environmental control of electron-phonon coupling in barium doped graphene. 2D Materials, 2016, 3, 045003.	4.4	14
92	Emergent Dirac carriers across a pressure-induced Lifshitz transition in black phosphorus. Physical Review B, 2018, 98, .	3.2	14
93	Carbon nanotubes grown from individual gas phase prepared iron catalyst particles. Physica Status Solidi (A) Applications and Materials Science, 2007, 204, 1786-1790.	1.8	13
94	Cyclohexane triggers staged growth of pure and vertically aligned single wall carbon nanotubes. Chemical Physics Letters, 2008, 454, 332-336.	2.6	13
95	Synthesis and spectroscopic characterization of alkali-metal intercalated $ZrSe_2$ . Dalton Transactions, 2018, 47, 2986-2991.	3.3	12
96	Exciton and phonon dynamics in highly aligned 7-atom wide armchair graphene nanoribbons as seen by time-resolved spontaneous Raman scattering. Nanoscale, 2018, 10, 17975-17982.	5.6	12
97	High-quality graphene on single crystal Ir(1 1 1) films on Si(1 1 1) wafers: Synthesis and multi-spectroscopic characterization. Carbon, 2015, 81, 167-173.	10.3	11
98	Spectroscopic characterization of $N_{100}$ armchair graphene nanoribbons. Physica Status Solidi - Rapid Research Letters, 2017, 11, 1700157.	2.4	11
99	Probing the origin of photoluminescence brightening in graphene nanoribbons. 2D Materials, 2019, 6, 035009.	4.4	11
100	Synthesis of single wall carbon nanotubes with invariant diameters using a modified laser assisted chemical vapour deposition route. Nanotechnology, 2006, 17, 5469-5473.	2.6	10
101	Enhanced light-matter interaction of aligned armchair graphene nanoribbons using arrays of plasmonic nanoantennas. 2D Materials, 2018, 5, 045006.	4.4	10
102	Unraveling the Excitonic Transition and Associated Dynamics in Confined Long Linear Carbon Chains with Time-Resolved Resonance Raman Scattering. Laser and Photonics Reviews, 2021, 15, 2100259.	8.7	10
103	Catalytic decomposition of n-heptane for the growth of high quality single wall carbon nanotubes. Chemical Physics Letters, 2006, 428, 416-420.	2.6	9
104	Preparation and electronic properties of potassium doped graphite single crystals. Physica Status Solidi (B): Basic Research, 2008, 245, 2072-2076.	1.5	8
105	Synthesis and electronic properties of chemically functionalized graphene on metal surfaces. Journal of Physics Condensed Matter, 2013, 25, 043001.	1.8	8
106	Observation of Room-Temperature Photoluminescence Blinking in Armchair-Edge Graphene Nanoribbons. Nano Letters, 2018, 18, 7038-7044.	9.1	8
107	Massive and massless charge carriers in an epitaxially strained alkali metal quantum well on graphene. Nature Communications, 2020, 11, 1340.	12.8	8
108	Growth of carbon nanotubes from wet chemistry and thin film multilayer catalysts. Physica Status Solidi (B): Basic Research, 2006, 243, 3054-3057.	1.5	7

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109	Anisotropy in the X-ray absorption of vertically aligned single wall carbon nanotubes. Physica Status Solidi (B): Basic Research, 2007, 244, 3978-3981.	1.5	7
110	Controlled thermodynamics for tunable electron doping of graphene on Ir(111). Physical Review B, 2016, 94, .	3.2	7
111	Direct Spectroscopic Evidence of Magnetic Proximity Effect in MoS <sub>2</sub> Monolayer on Graphene/Co. ACS Nano, 2022, 16, 7448-7456.	14.6	7
112	Growth mechanisms of inner-shell tubes in double-wall carbon nanotubes. Physica Status Solidi (B): Basic Research, 2007, 244, 4097-4101.	1.5	6
113	Cluster Superlattice Membranes. ACS Nano, 2020, 14, 13629-13637.	14.6	6
114	Low energy quasiparticle dispersion of graphite by angle-resolved photoemission spectroscopy. Physica Status Solidi (B): Basic Research, 2007, 244, 4129-4133.	1.5	5
115	Ab initio study of the (2 × 2) phase of barium on graphene. European Physical Journal B, 2018, 91, 1.	1.5	5
116	Synthesis of single wall carbon nanotubes with defined <sup>13</sup> C content. Physica Status Solidi (B): Basic Research, 2006, 243, 3050-3053.	1.5	4
117	Ultrahigh Vacuum Optical Spectroscopy of Chemically Functionalized Graphene Nanoribbons. , 2018, , 367-374.		4
118	Combined Ultra High Vacuum Raman and Electronic Transport Characterization of Large Area Graphene on SiO <sub>2</sub> . Physica Status Solidi (B): Basic Research, 2018, 255, 1800456.	1.5	4
119	Facile preparation of Au(111)/mica substrates for high-quality graphene nanoribbon synthesis. Physica Status Solidi (B): Basic Research, 2016, 253, 2362-2365.	1.5	3
120	Electron-phonon coupling origin of the graphene ĩ* -band kink via isotope effect. Physical Review B, 2021, 103, .	3.2	3
121	Alloyed surfaces: New substrates for graphene growth. Surface Science, 2017, 665, 28-31.	1.9	2
122	Silicon Cluster Arrays on the Monolayer of Hexagonal Boron Nitride on Ir(111). Journal of Physical Chemistry C, 2022, 126, 6809-6814.	3.1	2
123	Coupling to zone-center optical phonons in $\sqrt{3} \times \sqrt{3}$ Se <sub>2</sub> enhanced by charge density waves. Physical Review B, 2021, 104, .	3.2	2
124	Resonance Raman Scattering in Carbon Nanotubes and Nanographites. AIP Conference Proceedings, 2003, , .	0.4	1
125	Resonance Raman Spectroscopy to Study and Characterize Defects on Carbon Nanotubes and other Nano-Graphite Systems. Materials Research Society Symposia Proceedings, 2004, 858, 1.	0.1	1
126	Trigonal Anisotropy in Graphite and Carbon Nanotubes. Molecular Crystals and Liquid Crystals, 2006, 455, 287-294.	0.9	1



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127	Determination of bundle diameters in SWCNT material. AIP Conference Proceedings, 2001, , .	0.4	0
128	Characterization of nanographite and carbon nanotubes by polarization dependent optical spectroscopy. Materials Research Society Symposia Proceedings, 2002, 737, 521.	0.1	0
129	Anisotropy in the Phonon Dispersion Relations of Graphite and Carbon Nanotubes Measured by Raman Spectroscopy. Materials Research Society Symposia Proceedings, 2002, 737, 652.	0.1	0
130	Disorder Induced Triple Resonant Raman Phenomena in Single-Wall Carbon Nanotubes. AIP Conference Proceedings, 2002, , .	0.4	0
131	Double resonance Raman spectroscopy and optical properties of single wall carbon nanotubes. AIP Conference Proceedings, 2004, , .	0.4	0
132	Probing the origin of photoluminescence blinking in graphene nanoribbons: Influence of plasmonic field enhancement. 2D Materials, 2020, 7, 045009.	4.4	0
133	Two-Dimensional Semiconductors: Present and Future Challenges. Physica Status Solidi - Rapid Research Letters, 2020, 14, 2000041.	2.4	0
134	Size-limited high-density nanopore formation in two-dimensional moiré materials. Physical Review B, 2022, 105, .	3.2	0