Arkady Krasheninnikov

List of Publications by Year in Descending Order

239 papers	22,256 citations	68 h-index	147 g-index
259 ext. papers	24,702 ext. citations	7.3 avg, IF	7.28 L-index

#	Paper	IF	Citations
239	Data-Driven Quest for Two-Dimensional Non-van der Waals Materials.. *Nano Letters*, **2022**,	11.5	11
238	Physics and theory of defects in 2D materials: the role of reduced dimensionality **2022**, 7-41		1
237	Two-dimensional materials under ion irradiation: from defect production to structure and property engineering **2022**, 259-301		0
236	Compact Laser Devices for Measuring Airborne Microparticle Concentrations and Their Application at the Geophysical Monitoring Center of the Sadovsky Institute of Dynamics of Geospheres, Russian Academy of Sciences. *Seismic Instruments*, **2022**, 58, 235-243	1.1	
235	Quasi-two-dimensional NaCl crystals encapsulated between graphene sheets and their decomposition under an electron beam. *Nanoscale*, **2021**, 13, 19626-19633	7.7	1
234	Gas Permeability and Selectivity of a Porous WS2 Monolayer. *Journal of Physical Chemistry C*, **2021**, 125, 25055-25066	3.8	3
233	Boosting the Electrocatalytic Conversion of Nitrogen to Ammonia on Metal-Phthalocyanine-Based Two-Dimensional Conjugated Covalent Organic Frameworks. *Journal of the American Chemical Society*, **2021**, 143, 19992-20000	16.4	19
232	Polymorphic Phases of Metal Chlorides in the Confined 2D Space of Bilayer Graphene. *Advanced Materials*, **2021**, 33, e2105898	24	5
231	Photoluminescence line shapes for color centers in silicon carbide from density functional theory calculations. *Physical Review B*, **2021**, 103,	3.3	7
230	Enhancing Ferromagnetism and Tuning Electronic Properties of CrI Monolayers by Adsorption of Transition-Metal Atoms. *ACS Applied Materials & Interfaces*, **2021**, 13, 21593-21601	9.5	6
229	Atomistic Simulations of Defect Production in Monolayer and Bulk Hexagonal Boron Nitride under Low- and High-Fluence Ion Irradiation. *Nanomaterials*, **2021**, 11,	5.4	3
228	Defect Agglomeration and Electron-Beam-Induced Local-Phase Transformations in Single-Layer MoTe2. *Journal of Physical Chemistry C*, **2021**, 125, 13601-13609	3.8	3
227	Mirror twin boundaries in MoSe monolayers as one dimensional nanotemplates for selective water adsorption. *Nanoscale*, **2021**, 13, 1038-1047	7.7	5
226	Robust Magnetoelectric Effect in the Decorated Graphene/InSe Heterostructure. *ACS Applied Materials & Interfaces*, **2021**, 13, 3033-3039	9.5	6
225	Formation of Highly Doped Nanostripes in 2D Transition Metal Dichalcogenides via a Dislocation Climb Mechanism. *Advanced Materials*, **2021**, 33, e2007819	24	3
224	Controlled generation of luminescent centers in hexagonal boron nitride by irradiation engineering. *Science Advances*, **2021**, 7,	14.3	12
223	Enhanced Trion Emission in Monolayer MoSe2 by Constructing a Type-I Van Der Waals Heterostructure. *Advanced Functional Materials*, **2021**, 31, 2104960	15.6	2

222	Layer-Dependent Band Gaps of Platinum Dichalcogenides. *ACS Nano*, **2021**, 15, 13249-13259	16.7	9
221	Tunable electronic properties and enhanced ferromagnetism in CrGeTemonolayer by strain engineering. *Nanotechnology*, **2021**, 32,	3.4	2
220	Chlorine doping of MoSe flakes by ion implantation. *Nanoscale*, **2021**, 13, 5834-5846	7.7	8
219	Polymorphic Phases of Metal Chlorides in the Confined 2D Space of Bilayer Graphene (Adv. Mater. 52/2021). *Advanced Materials*, **2021**, 33, 2170415	24	0
218	Electron-beam-stimulated Atomic Migration Processes in Single-layer MoTe2. *Microscopy and Microanalysis*, **2020**, 26, 534-537	0.5	
217	Electron Irradiation of Two-dimensional MoS2: Insights into the Influence of Electronic Excitations from First-principle Calculations. *Microscopy and Microanalysis*, **2020**, 26, 784-785	0.5	0
216	Strain robust spin gapless semiconductors/half-metals in transition metal embedded MoSe monolayer. *Journal of Physics Condensed Matter*, **2020**, 32, 365305	1.8	4
215	Alkali metals inside bi-layer graphene and MoS2: Insights from first-principles calculations. *Nano Energy*, **2020**, 75, 104927	17.1	16
214	Enhanced Ferromagnetism and Tunable Magnetism in FeGeTe Monolayer by Strain Engineering. *ACS Applied Materials & Interfaces*, **2020**, 12, 26367-26373	9.5	32
213	Simulating Raman spectra by combining first-principles and empirical potential approaches with application to defective MoS2. *Npj Computational Materials*, **2020**, 6,	10.9	9
212	Synergistic electroreduction of carbon dioxide to carbon monoxide on bimetallic layered conjugated metal-organic frameworks. *Nature Communications*, **2020**, 11, 1409	17.4	166
211	Formation of Defects in Two-Dimensional MoS in the Transmission Electron Microscope at Electron Energies below the Knock-on Threshold: The Role of Electronic Excitations. *Nano Letters*, **2020**, 20, 2865-2870	11.5	40
210	Revealing the defect-dominated oxygen evolution activity of hematene. *Journal of Materials Chemistry A*, **2020**, 8, 6709-6716	13	23
209	Band Bending and Valence Band Quantization at Line Defects in MoS. *ACS Nano*, **2020**, 14, 9176-9187	16.7	8
208	Local vibrational modes of Si vacancy spin qubits in SiC. *Physical Review B*, **2020**, 101,	3.3	16
207	Megacity Aerosol Pollution and Atmospheric Electric Field Disturbances. *Izvestiya - Atmospheric and Oceanic Physics*, **2020**, 56, 759-772	1	1
206	Reversible crystalline-to-amorphous phase transformation in monolayer MoS2 under grazing ion irradiation. *2D Materials*, **2020**, 7, 025005	5.9	9
205	Tailoring the Electronic and Magnetic Properties of Hematene by Surface Passivation: Insights from First-Principles Calculations. *Journal of Physical Chemistry C*, **2020**, 124, 22784-22792	3.8	3

204	Freestanding and Supported MoS Monolayers under Cluster Irradiation: Insights from Molecular Dynamics Simulations. *ACS Applied Materials & Interfaces*, **2020**, 12, 37454-37463	9.5	10
203	Are two-dimensional materials radiation tolerant?. *Nanoscale Horizons*, **2020**, 5, 1447-1452	10.8	10
202	Channeling effects in gold nanoclusters under He ion irradiation: insights from molecular dynamics simulations. *Nanotechnology*, **2020**, 31, 035302	3.4	7
201	Which Transition Metal Atoms Can Be Embedded into Two-Dimensional Molybdenum Dichalcogenides and Add Magnetism?. *Nano Letters*, **2019**, 19, 4581-4587	11.5	36
200	Widely tunable GaAs bandgap via strain engineering in core/shell nanowires with large lattice mismatch. *Nature Communications*, **2019**, 10, 2793	17.4	34
199	Electron-Beam-Driven Structure Evolution of Single-Layer MoTe2 for Quantum Devices. *ACS Applied Nano Materials*, **2019**, 2, 3262-3270	5.6	23
198	Tomonaga-Luttinger Liquid in a Box: Electrons Confined within MoS2 Mirror-Twin Boundaries. *Physical Review X*, **2019**, 9,	9.1	21
197	Room-Temperature Ferromagnetism in MoTe2 by Post-Growth Incorporation of Vanadium Impurities. *Advanced Electronic Materials*, **2019**, 5, 1900044	6.4	38
196	Thermal transport in MoS2 from molecular dynamics using different empirical potentials. *Physical Review B*, **2019**, 99,	3.3	31
195	Enhanced sensitivity of MoSe monolayer for gas adsorption induced by electric field. *Journal of Physics Condensed Matter*, **2019**, 31, 445301	1.8	16
194	Layer Rotation-Angle-Dependent Excitonic Absorption in van der Waals Heterostructures Revealed by Electron Energy Loss Spectroscopy. *ACS Nano*, **2019**, 13, 9541-9550	16.7	17
193	Nonstoichiometric Phases of Two-Dimensional Transition-Metal Dichalcogenides: From Chalcogen Vacancies to Pure Metal Membranes. *Journal of Physical Chemistry Letters*, **2019**, 10, 6492-6498	6.4	12
192	Efficient method for calculating Raman spectra of solids with impurities and alloys and its application to two-dimensional transition metal dichalcogenides. *Physical Review Materials*, **2019**, 3,	3.2	9
191	Perforating Freestanding Molybdenum Disulfide Monolayers with Highly Charged Ions. *Journal of Physical Chemistry Letters*, **2019**, 10, 904-910	6.4	28
190	Effects of electron beam generated lattice defects on the periodic lattice distortion structure in 1T□aS2 and 1T□aSe2 thin layers. *Physical Review B*, **2019**, 99,	3.3	3
189	Metallic Twin Boundaries Boost the Hydrogen Evolution Reaction on the Basal Plane of Molybdenum Selenotellurides. *Advanced Energy Materials*, **2018**, 8, 1800031	21.8	66
188	Post-Synthesis Modifications of Two-Dimensional MoSe or MoTe by Incorporation of Excess Metal Atoms into the Crystal Structure. *ACS Nano*, **2018**, 12, 3975-3984	16.7	39
187	Hydrogen-assisted post-growth substitution of tellurium into molybdenum disulfide monolayers with tunable compositions. *Nanotechnology*, **2018**, 29, 145603	3.4	10

186	MoS2 Quantum Dots as Efficient Catalyst Materials for the Oxygen Evolution Reaction. *ACS Catalysis*, **2018**, 8, 1683-1689	13.1	135
185	Supported Two-Dimensional Materials under Ion Irradiation: The Substrate Governs Defect Production. *ACS Applied Materials & Interfaces*, **2018**, 10, 30827-30836	9.5	50
184	When defects are not defects. *Nature Materials*, **2018**, 17, 757-758	27	14
183	Revealing the Atomic Defects of WS2 Governing Its Distinct Optical Emissions. *Advanced Functional Materials*, **2018**, 28, 1704210	15.6	49
182	Reversible superdense ordering of lithium between two graphene sheets. *Nature*, **2018**, 564, 234-239	50.4	121
181	Observation of charge density waves in free-standing 1T-TaSe2 monolayers by transmission electron microscopy. *Applied Physics Letters*, **2018**, 113, 173103	3.4	14
180	Electron Irradiation-Induced Defects and Phase Transformations in Two-Dimensional Transition Metal Dichalcogenides. *Microscopy and Microanalysis*, **2018**, 24, 1592-1593	0.5	1
179	1T phase as an efficient hole injection layer to TMDs transistors: a universal approach to achieve p-type contacts. *2D Materials*, **2018**, 5, 031012	5.9	19
178	Nanostructuring few-layer graphene films with swift heavy ions for electronic application: tuning of electronic and transport properties. *Nanoscale*, **2018**, 10, 14499-14509	7.7	26
177	Atomic Defects and Doping of Monolayer NbSe. *ACS Nano*, **2017**, 11, 2894-2904	16.7	46
176	From Permeation to Cluster Arrays: Graphene on Ir(111) Exposed to Carbon Vapor. *Nano Letters*, **2017**, 17, 3105-3112	11.5	14
175	Two-dimensional MoS 2 under ion irradiation: from controlled defect production to electronic structure engineering. *2D Materials*, **2017**, 4, 025078	5.9	99
174	Structural Transformations in Two-Dimensional Transition-Metal Dichalcogenide MoS under an Electron Beam: Insights from First-Principles Calculations. *Journal of Physical Chemistry Letters*, **2017**, 8, 3061-3067	6.4	68
173	Acoustic gravity waves and the atmospheric electric field perturbations accompanying them. *Geomagnetism and Aeronomy*, **2017**, 57, 335-346	0.9	4
172	Revisiting Hollandites: Channels Filling by Main-Group Elements Together with Transition Metals in Bi2□VyV8O16. *Chemistry of Materials*, **2017**, 29, 5558-5565	9.6	4
171	Tailoring the optical properties of atomically-thin WSvia ion irradiation. *Nanoscale*, **2017**, 9, 11027-11034	7.7	62
170	Structural Distortions and Charge Density Waves in Iodine Chains Encapsulated inside Carbon Nanotubes. *Nano Letters*, **2017**, 17, 3694-3700	11.5	33
169	Engineering the Electronic Properties of Two-Dimensional Transition Metal Dichalcogenides by Introducing Mirror Twin Boundaries. *Advanced Electronic Materials*, **2017**, 3, 1600468	6.4	59

168	Creating nanoporous graphene with swift heavy ions. *Carbon*, **2017**, 114, 511-518	10.4	43
167	Charge equilibration times for slow highly charged ions in single layer graphene. *Journal of Physics: Conference Series*, **2017**, 875, 112001	0.3	
166	Engineering and modifying two-dimensional materials by electron beams. *MRS Bulletin*, **2017**, 42, 667-676	3.2	48
165	Interatomic Coulombic Decay: The Mechanism for Rapid Deexcitation of Hollow Atoms. *Physical Review Letters*, **2017**, 119, 103401	7.4	53
164	Substitutional carbon doping of free-standing and Ru-supported BN sheets: a first-principles study. *Journal of Physics Condensed Matter*, **2017**, 29, 415301	1.8	4
163	Luminescence of defects in the structural transformation of layered tin dichalcogenides. *Applied Physics Letters*, **2017**, 111, 262102	3.4	14
162	Vibrational Properties of Metal Phosphorus Trichalcogenides from First-Principles Calculations. *Journal of Physical Chemistry C*, **2017**, 121, 27207-27217	3.8	36
161	Towards diluted magnetism in TaAs. *Physical Review Materials*, **2017**, 1,	3.2	1
160	From Point to Line Defects in Two-Dimensional Transition Metal Dichalcogenides: Insights from Transmission Electron Microscopy and First-Principles Calculations. *Carbon Nanostructures*, **2017**, 71-85	0.6	1
159	Study of acoustic emission signals during fracture shear deformation. *Acoustical Physics*, **2016**, 62, 505-513	1.1	10
158	Vibrational Properties of a Two-Dimensional Silica Kagome Lattice. *ACS Nano*, **2016**, 10, 10929-10935	16.7	12
157	Mechanical properties and current-carrying capacity of Al reinforced with graphene/BN nanoribbons: a computational study. *Nanoscale*, **2016**, 8, 20080-20089	7.7	14
156	Electron-Beam Induced Transformations of Layered Tin Dichalcogenides. *Nano Letters*, **2016**, 16, 4410-6	11.5	82
155	Nanostructured BN-Mg composites: features of interface bonding and mechanical properties. *Physical Chemistry Chemical Physics*, **2016**, 18, 965-9	3.6	10
154	Phosphorene under electron beam: from monolayer to one-dimensional chains. *Nanoscale*, **2016**, 8, 7949-57	7.7	33
153	Ultrafast electronic response of graphene to a strong and localized electric field. *Nature Communications*, **2016**, 7, 13948	17.4	91
152	Atomic scale microstructure and properties of Se-deficient two-dimensional MoSe2. *ACS Nano*, **2015**, 9, 3274-83	16.7	176
151	Solubility of Boron, Carbon, and Nitrogen in Transition Metals: Getting Insight into Trends from First-Principles Calculations. *Journal of Physical Chemistry Letters*, **2015**, 6, 3263-3268	6.4	40

150	Comment on "Interfacial carbon nanoplatelet formation by ion irradiation of graphene on iridium(111)". *ACS Nano*, **2015**, 9, 4664-5	16.7	7
149	Line and rotational defects in boron-nitrene: Structure, energetics, and dependence on mechanical strain from first-principles calculations. *Physica Status Solidi (B): Basic Research*, **2015**, 252, 1725-1730	1.3	6
148	Three-fold rotational defects in two-dimensional transition metal dichalcogenides. *Nature Communications*, **2015**, 6, 6736	17.4	149
147	Single-Layer ReS□Two-Dimensional Semiconductor with Tunable In-Plane Anisotropy. *ACS Nano*, **2015**, 9, 11249-57	16.7	286
146	Native defects in bulk and monolayer MoS2 from first principles. *Physical Review B*, **2015**, 91,	3.3	339
145	Xe irradiation of graphene on Ir(111): From trapping to blistering. *Physical Review B*, **2015**, 92,	3.3	24
144	Silicon and silicon-nitrogen impurities in graphene: Structure, energetics, and effects on electronic transport. *Physical Review B*, **2015**, 92,	3.3	21
143	Simulations of electromechanical shape transformations of Au nanoparticles. *Physica Status Solidi (B): Basic Research*, **2015**, 252, 144-148	1.3	2
142	Atomic scale interface design and characterisation. *Beilstein Journal of Nanotechnology*, **2015**, 6, 1708-11	3	2
141	Properties of individual dopant atoms in single-layer MoS2: atomic structure, migration, and enhanced reactivity. *Advanced Materials*, **2014**, 26, 2857-61	24	229
140	Triazine-based graphitic carbon nitride: a two-dimensional semiconductor. *Angewandte Chemie - International Edition*, **2014**, 53, 7450-5	16.4	412
139	Triazine-Based Graphitic Carbon Nitride: a Two-Dimensional Semiconductor. *Angewandte Chemie*, **2014**, 126, 7580-7585	3.6	125
138	Electronic stopping power from first-principles calculations with account for core electron excitations and projectile ionization. *Physical Review B*, **2014**, 89,	3.3	59
137	Toward Stronger Al/BN Nanotube Composite Materials: Insights into Bonding at the Al/BN Interface from First-Principles Calculations. *Journal of Physical Chemistry C*, **2014**, 118, 26894-26901	3.8	21
136	Solid-State Growth of One- and Two-Dimensional Silica Structures on Metal Surfaces. *Journal of Physical Chemistry C*, **2014**, 118, 21001-21005	3.8	6
135	Semiconductor to Metal to Half-Metal Transition in Pt-Embedded Zigzag Graphene Nanoribbons. *Journal of Physical Chemistry C*, **2014**, 118, 16133-16139	3.8	16
134	Atomic structure and dynamic behaviour of truly one-dimensional ionic chains inside carbon nanotubes. *Nature Materials*, **2014**, 13, 1050-4	27	66
133	Coronene encapsulation in single-walled carbon nanotubes: stacked columns, peapods, and nanoribbons. *ChemPhysChem*, **2014**, 15, 1660-5	3.2	24

132	Fabrication and atomic structure of size-selected, layered MoS2 clusters for catalysis. *Nanoscale*, **2014**, 6, 12463-9	7.7	33
131	Doping Properties and Phase Transition in Single-Layer MoS2. *Microscopy and Microanalysis*, **2014**, 20, 1750-1751	0.5	1
130	Inorganic Two-Dimensional Materials under Electron Irradiation: Stability, Evolution of the Atomic Structure, and Beam-Mediated Doping. *Microscopy and Microanalysis*, **2014**, 20, 1756-1757	0.5	
129	Interfacial carbon nanoplatelet formation by ion irradiation of graphene on iridium(111). *ACS Nano*, **2014**, 8, 12208-18	16.7	23
128	Experimental observation of boron nitride chains. *ACS Nano*, **2014**, 8, 11950-7	16.7	57
127	Charged Point Defects in the Flatland: Accurate Formation Energy Calculations in Two-Dimensional Materials. *Physical Review X*, **2014**, 4,	9.1	49
126	Atomic scale study of the life cycle of a dislocation in graphene from birth to annihilation. *Nature Communications*, **2013**, 4, 2098	17.4	133
125	Strains induced by point defects in graphene on a metal. *Physical Review Letters*, **2013**, 111, 085501	7.4	43
124	Electronic structure of boron nitride sheets doped with carbon from first-principles calculations. *Physical Review B*, **2013**, 87,	3.3	129
123	Electronic structures and optical properties of realistic transition metal dichalcogenide heterostructures from first principles. *Physical Review B*, **2013**, 88,	3.3	342
122	Defects in bilayer silica and graphene: common trends in diverse hexagonal two-dimensional systems. *Scientific Reports*, **2013**, 3, 3482	4.9	71
121	From point to extended defects in two-dimensional MoS2: Evolution of atomic structure under electron irradiation. *Physical Review B*, **2013**, 88,	3.3	334
120	Ion-irradiation-induced defects in isotopically-labeled two layered graphene: enhanced in-situ annealing of the damage. *Advanced Materials*, **2013**, 25, 1004-9	24	66
119	Doped Graphene as a Material for Oxygen Reduction Reaction in Hydrogen Fuel Cells: A Computational Study. *ACS Catalysis*, **2013**, 3, 159-165	13.1	95
118	Chirality-dependent reactivity of individual single-walled carbon nanotubes. *Small*, **2013**, 9, 1379-86	11	33
117	Ion impacts on graphene/Ir(111): interface channeling, vacancy funnels, and a nanomesh. *Nano Letters*, **2013**, 13, 1948-55	11.5	73
116	Dual origin of defect magnetism in graphene and its reversible switching by molecular doping. *Nature Communications*, **2013**, 4, 2010	17.4	189
115	In situ growth of cellular two-dimensional silicon oxide on metal substrates. *ACS Nano*, **2013**, 7, 5175-80	16.7	28

114	Two-Dimensional Transition Metal Dichalcogenide Alloys: Stability and Electronic Properties. *Journal of Physical Chemistry Letters*, **2012**, 3, 3652-6	6.4	241
113	Atomistic description of electron beam damage in nitrogen-doped graphene and single-walled carbon nanotubes. *ACS Nano*, **2012**, 6, 8837-46	16.7	101
112	Effects of confinement and environment on the electronic structure and exciton binding energy of MoS2 from first principles. *Physical Review B*, **2012**, 86,	3.3	474
111	The Role of Stable and Mobile Carbon Adspecies in Copper-Promoted Graphene Growth. *Journal of Physical Chemistry C*, **2012**, 116, 5802-5809	3.8	64
110	Two-dimensional transition metal dichalcogenides under electron irradiation: defect production and doping. *Physical Review Letters*, **2012**, 109, 035503	7.4	768
109	Accurate measurement of electron beam induced displacement cross sections for single-layer graphene. *Physical Review Letters*, **2012**, 108, 196102	7.4	326
108	Are we van der Waals ready?. *Journal of Physics Condensed Matter*, **2012**, 24, 424218	1.8	112
107	Stability of graphene edges under electron beam: equilibrium energetics versus dynamic effects. *ACS Nano*, **2012**, 6, 671-6	16.7	104
106	Gold-embedded zigzag graphene nanoribbons as spin gapless semiconductors. *Physical Review B*, **2012**, 86,	3.3	38
105	Spin-half paramagnetism in graphene induced by point defects. *Nature Physics*, **2012**, 8, 199-202	16.2	638
104	van der Waals bonding in layered compounds from advanced density-functional first-principles calculations. *Physical Review Letters*, **2012**, 108, 235502	7.4	665
103	Direct imaging of a two-dimensional silica glass on graphene. *Nano Letters*, **2012**, 12, 1081-6	11.5	206
102	Engineering the atomic structure of carbon nanotubes by a focused electron beam: new morphologies at the sub-nanometer scale. *ChemPhysChem*, **2012**, 13, 2596-600	3.2	15
101	Atom-by-atom observation of grain boundary migration in graphene. *Nano Letters*, **2012**, 12, 3168-73	11.5	154
100	Ion irradiation tolerance of graphene as studied by atomistic simulations. *Applied Physics Letters*, **2012**, 100, 233108	3.4	39
99	Strain Fields and Electronic Structure of Vacancy-Type Defects in Graphene from First-Principles Simulation. *NATO Science for Peace and Security Series B: Physics and Biophysics*, **2012**, 49-59	0.2	
98	Tuning electronic and magnetic properties of zigzag graphene nanoribbons by large-scale bending. *Applied Physics Letters*, **2012**, 100, 263115	3.4	11
97	Atomistic simulations of the implantation of low-energy boron and nitrogen ions into graphene. *Physical Review B*, **2011**, 83,	3.3	114

96	Characterization of ion-irradiation-induced defects in multi-walled carbon nanotubes. *New Journal of Physics*, **2011**, 13, 073004	2.9	41
95	Cutting and controlled modification of graphene with ion beams. *Nanotechnology*, **2011**, 22, 175306	3.4	119
94	From point defects in graphene to two-dimensional amorphous carbon. *Physical Review Letters*, **2011**, 106, 105505	7.4	582
93	Structural defects in graphene. *ACS Nano*, **2011**, 5, 26-41	16.7	2388
92	Stone-Wales-type transformations in carbon nanostructures driven by electron irradiation. *Physical Review B*, **2011**, 83,	3.3	199
91	Synthesis of graphene nanoribbons encapsulated in single-walled carbon nanotubes. *Nano Letters*, **2011**, 11, 4352-6	11.5	148
90	Bound and free self-interstitial defects in graphite and bilayer graphene: A computational study. *Physical Review B*, **2011**, 84,	3.3	31
89	Attractive interaction between transition-metal atom impurities and vacancies in graphene: a first-principles study. *Theoretical Chemistry Accounts*, **2011**, 129, 625-630	1.9	89
88	Production of defects in hexagonal boron nitride monolayer under ion irradiation. *Nuclear Instruments & Methods in Physics Research B*, **2011**, 269, 1327-1331	1.2	43
87	Mechanism of swift chemical sputtering: Comparison of Be/C/W dimer bond breaking. *Nuclear Instruments & Methods in Physics Research B*, **2011**, 269, 1257-1261	1.2	8
86	Berseneva, Krasheninnikov, and Nieminen Reply:. *Physical Review Letters*, **2011**, 107,	7.4	5
85	Mechanisms of postsynthesis doping of boron nitride nanostructures with carbon from first-principles simulations. *Physical Review Letters*, **2011**, 107, 035501	7.4	84
84	Boron nitride formation on magnesium studied by ab initio calculations. *Physical Review B*, **2010**, 81,	3.3	5
83	Response of mechanically strained nanomaterials to irradiation: Insight from atomistic simulations. *Physical Review B*, **2010**, 82,	3.3	26
82	Effects of ion bombardment on a two-dimensional target: Atomistic simulations of graphene irradiation. *Physical Review B*, **2010**, 81,	3.3	303
81	A first-principles study on magnetic coupling between carbon adatoms on graphene. *New Journal of Physics*, **2010**, 12, 113021	2.9	29
80	Migration of gold atoms in graphene ribbons: Role of the edges. *Physical Review B*, **2010**, 81,	3.3	39
79	Effect of iron nanoparticle geometry on the energetics of carbon interstititals. *Physica Status Solidi C: Current Topics in Solid State Physics*, **2010**, 7, NA-NA		1

78	Defect-induced junctions between single- or double-wall carbon nanotubes and metal crystals. *Nanoscale*, **2010**, 2, 901-5	7.7	18
77	Migration and localization of metal atoms on strained graphene. *Physical Review Letters*, **2010**, 105, 196102	7.4	281
76	Electron knock-on damage in hexagonal boron nitride monolayers. *Physical Review B*, **2010**, 82,	3.3	212
75	Submonolayers of carbon on □Fe facets: An ab initio study. *Physical Review B*, **2010**, 82,	3.3	17
74	Ion and electron irradiation-induced effects in nanostructured materials. *Journal of Applied Physics*, **2010**, 107, 071301	2.5	759
73	Ion irradiation of multi-walled boron nitride nanotubes. *Physica Status Solidi C: Current Topics in Solid State Physics*, **2010**, 7, NA-NA		10
72	Modifying the electronic structure of semiconducting single-walled carbon nanotubes by Ar+ ion irradiation. *Physical Review B*, **2009**, 79,	3.3	41
71	Computational study of boron nitride nanotube synthesis: How catalyst morphology stabilizes the boron nitride bond. *Physical Review B*, **2009**, 80,	3.3	16
70	Quantum and Classical Molecular Dynamics Studies of the Threshold Displacement Energy in Si Bulk and Nanowire. *Materials Research Society Symposia Proceedings*, **2009**, 1181, 72		4
69	Growth of single-walled carbon nanotubes from sharp metal tips. *Small*, **2009**, 5, 2710-5	11	24
68	Embedding transition-metal atoms in graphene: structure, bonding, and magnetism. *Physical Review Letters*, **2009**, 102, 126807	7.4	915
67	Effects of ion beam heating on Raman spectra of single-walled carbon nanotubes. *Applied Physics Letters*, **2009**, 94, 071907	3.4	8
66	The diffusion of carbon atoms inside carbon nanotubes. *New Journal of Physics*, **2008**, 10, 023022	2.9	38
65	Plastic deformation of single nanometer-sized crystals. *Physical Review Letters*, **2008**, 101, 156101	7.4	59
64	Atomistic Computer Simulations of Irradiation-Induced Effects in Nanostructured Carbon Materials. *Journal of Computational and Theoretical Nanoscience*, **2008**, 5, 1828-1851	0.3	10
63	Electrical properties of C4+ irradiated single-walled carbon nanotube paper. *Physica Status Solidi (B): Basic Research*, **2008**, 245, 2280-2283	1.3	19
62	Ion irradiation of carbon nanotubes encapsulating cobalt crystals. *Physica E: Low-Dimensional Systems and Nanostructures*, **2008**, 40, 2618-2621	3	10
61	In-situ electron irradiation studies of metal-carbon nanostructures **2008**, 121-122		

60	Atomistic simulations of irradiation effects in carbon nanotubes: an overview. *Radiation Effects and Defects in Solids*, **2007**, 162, 157-169	0.9	14
59	Engineering of nanostructured carbon materials with electron or ion beams. *Nature Materials*, **2007**, 6, 723-33	27	829
58	A novel hybrid carbon material. *Nature Nanotechnology*, **2007**, 2, 156-61	28.7	326
57	Creation of paired electron states in the gap of semiconducting carbon nanotubes by correlated hydrogen adsorption. *New Journal of Physics*, **2007**, 9, 275-275	2.9	31
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