

# Mikhail I Katsnelson

## List of Publications by Year in Descending Order

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

396  
papers

70,447  
citations

85  
h-index

264  
g-index

422  
ext. papers

77,637  
ext. citations

6.9  
avg, IF

8.03  
L-index

#	Paper	IF	Citations
396	Toward a theory of evolution as multilevel learning.. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , <b>2022</b> , 119,	11.5	6
395	Thermodynamics of evolution and the origin of life.. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , <b>2022</b> , 119,	11.5	9
394	Quantum dot-like plasmonic modes in twisted bilayer graphene supercells. <i>2D Materials</i> , <b>2022</b> , 9, 014004,	4.9	0
393	Gating Orbital Memory with an Atomic Donor.. <i>Physical Review Letters</i> , <b>2022</b> , 128, 106801	7.4	0
392	A DMI Guide to Magnets Micro-World. <i>Journal of Experimental and Theoretical Physics</i> , <b>2021</b> , 132, 506-516	6	0
391	Quantifying the interplay between fine structure and geometry of an individual molecule on a surface. <i>Physical Review B</i> , <b>2021</b> , 103,	3.3	7
390	High-Pressure Synthesis of Dirac Materials: Layered van der Waals Bonded BeN <sub>4</sub> Polymorph. <i>Physical Review Letters</i> , <b>2021</b> , 126, 175501	7.4	22
389	Random phase approximation for gapped systems: Role of vertex corrections and applicability of the constrained random phase approximation. <i>Physical Review B</i> , <b>2021</b> , 104,	3.3	3
388	Electron correlation effects on exchange interactions and spin excitations in 2D van der Waals materials. <i>Npj Computational Materials</i> , <b>2021</b> , 7,	10.9	14
387	Evolution in the weak-mutation limit: Stasis periods punctuated by fast transitions between saddle points on the fitness landscape. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , <b>2021</b> , 118,	11.5	2
386	Probing the topology of the quantum analog of a classical skyrmion. <i>Physical Review B</i> , <b>2021</b> , 103,	3.3	2
385	Gauge invariance and Ward identities in nonlinear response theory. <i>Annals of Physics</i> , <b>2021</b> , 431, 168523	2.5	0
384	Scale without conformal invariance in membrane theory. <i>Nuclear Physics B</i> , <b>2021</b> , 969, 115482	2.8	2
383	Emergent Quantumness in Neural Networks. <i>Foundations of Physics</i> , <b>2021</b> , 51, 1	1.2	2
382	Dislocation structure and mobility in the layered semiconductor InSe: a first-principles study. <i>2D Materials</i> , <b>2021</b> , 8, 045028	5.9	0
381	Unconventional magnetism and electronic state in the frustrated layered system PdCrO <sub>2</sub> . <i>Physical Review B</i> , <b>2020</b> , 102,	3.3	3
380	Thermal ripples in bilayer graphene. <i>Physical Review B</i> , <b>2020</b> , 102,	3.3	2

- 379 Hall conductivity of a Sierpiński carpet. *Physical Review B*, **2020**, 101, 3-3 12
- 378 Scaling behavior of crystalline membranes: An Expansion approach. *Nuclear Physics B*, **2020**, 956, 115040.8 7
- 377 The electronic structure of ideal graphene **2020**, 1-23
- 376 Electron states in a magnetic field **2020**, 24-62 0
- 375 Quantum transport via evanescent waves **2020**, 63-76
- 374 The Klein paradox and chiral tunneling **2020**, 77-107
- 373 Edges, nanoribbons, and quantum dots **2020**, 108-140
- 372 Point defects **2020**, 141-167
- 371 Optics and response functions **2020**, 168-192
- 370 The Coulomb problem **2020**, 193-212
- 369 Crystal lattice dynamics, structure, and thermodynamics **2020**, 213-256
- 368 Gauge fields and strain engineering **2020**, 257-278
- 367 Scattering mechanisms and transport properties **2020**, 279-325
- 366 Spin effects and magnetism **2020**, 326-350
- 365 Graphene on hexagonal boron nitride **2020**, 351-378
- 364 Twisted bilayer graphene **2020**, 379-388
- 363 Many-body effects in graphene **2020**, 389-400
- 362 Self-induced spin glass state in elemental and crystalline neodymium. *Science*, **2020**, 368, 33-3 10

361	Temperature-Induced Lifshitz Transition and Possible Excitonic Instability in ZrSiSe. <i>Physical Review Letters</i> , <b>2020</b> , 124, 236601	7.4	14
360	Limits on gas impermeability of graphene. <i>Nature</i> , <b>2020</b> , 579, 229-232	50.4	109
359	Electronic correlations in nodal-line semimetals. <i>Nature Physics</i> , <b>2020</b> , 16, 636-641	16.2	31
358	Nonequilibrium dual-boson approach. <i>Physical Review B</i> , <b>2020</b> , 101,	3.3	2
357	Pressure and electric field dependence of quasicrystalline electronic states in 30° twisted bilayer graphene. <i>Physical Review B</i> , <b>2020</b> , 102,	3.3	5
356	Atom-by-atom construction of attractors in a tunable finite size spin array. <i>New Journal of Physics</i> , <b>2020</b> , 22, 023038	2.9	4
355	Orbitally-resolved ferromagnetism of monolayer CrI <sub>3</sub> . <i>2D Materials</i> , <b>2020</b> , 7, 025036	5.9	30
354	Phonon-mediated superconductivity in strongly correlated electron systems: A Luttinger-Ward functional approach. <i>Annals of Physics</i> , <b>2020</b> , 417, 168100	2.5	0
353	Exactly solvable model of strongly correlated d-wave superconductivity. <i>Physical Review B</i> , <b>2020</b> , 101,	3.3	3
352	Large-area, periodic, and tunable intrinsic pseudo-magnetic fields in low-angle twisted bilayer graphene. <i>Nature Communications</i> , <b>2020</b> , 11, 371	17.4	32
351	Generalization properties of neural network approximations to frustrated magnet ground states. <i>Nature Communications</i> , <b>2020</b> , 11, 1593	17.4	30
350	Control of magnetic interactions between surface adatoms via orbital repopulation. <i>2D Materials</i> , <b>2020</b> , 7, 045007	5.9	0
349	The Physics of Graphene <b>2020</b> ,		16
348	Direct Observation of Incommensurate-Commensurate Transition in Graphene-hBN Heterostructures via Optical Second Harmonic Generation. <i>ACS Applied Materials &amp; Interfaces</i> , <b>2020</b> , 12, 27758-27764	9.5	4
347	Multiscale structural complexity of natural patterns. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , <b>2020</b> , 117, 30241-30251	11.5	5
346	Magnetic polaron and antiferromagnetic-ferromagnetic transition in doped bilayer CrI <sub>3</sub> . <i>Physical Review B</i> , <b>2020</b> , 101,	3.3	15
345	Thermal fluctuations in crystalline membranes with long-range dipole interactions. <i>Annals of Physics</i> , <b>2020</b> , 412, 168016	2.5	2
344	Relativistic exchange interactions in CrX <sub>3</sub> (X=Cl, Br, I) monolayers. <i>Physical Review B</i> , <b>2020</b> , 102,	3.3	17

343	Dual fermion method as a prototype of generic reference-system approach for correlated fermions. <i>Annals of Physics</i> , <b>2020</b> , 422, 168310	2.5	2
342	Magnetic Two-Dimensional Chromium Trihalides: A Theoretical Perspective. <i>Nano Letters</i> , <b>2020</b> , 20, 6225-6234	4.2	4
341	Linearized spectral decimation in fractals. <i>Physical Review B</i> , <b>2020</b> , 102,	3.3	1
340	Origin of the vortex displacement field in twisted bilayer graphene. <i>Physical Review B</i> , <b>2020</b> , 102,	3.3	5
339	Electronic structure of 30° twisted double bilayer graphene. <i>Physical Review B</i> , <b>2020</b> , 102,	3.3	2
338	No waves of intelligent design. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , <b>2020</b> , 117, 19639-19640	11.5	1
337	Detecting quantum critical points in the t-[Formula: see text] Fermi-Hubbard model via complex network theory. <i>Scientific Reports</i> , <b>2020</b> , 10, 20470	4.9	2
336	Strong Electron-Phonon Coupling and its Influence on the Transport and Optical Properties of Hole-Doped Single-Layer InSe. <i>Physical Review Letters</i> , <b>2019</b> , 123, 176401	7.4	18
335	Large out-of-plane piezoelectricity of oxygen functionalized MXenes for ultrathin piezoelectric cantilevers and diaphragms. <i>Nano Energy</i> , <b>2019</b> , 65, 104058	17.1	24
334	Power-law energy level spacing distributions in fractals. <i>Physical Review B</i> , <b>2019</b> , 99,	3.3	9
333	Two-particle Fermi liquid parameters at the Mott transition: Vertex divergences, Landau parameters, and incoherent response in dynamical mean-field theory. <i>Physical Review B</i> , <b>2019</b> , 99,	3.3	13
332	Resonant optical second harmonic generation in graphene-based heterostructures. <i>Physical Review B</i> , <b>2019</b> , 99,	3.3	22
331	Effective Ising model for correlated systems with charge ordering. <i>Physical Review B</i> , <b>2019</b> , 99,	3.3	10
330	Separation of conditions as a prerequisite for quantum theory. <i>Annals of Physics</i> , <b>2019</b> , 403, 112-135	2.5	2
329	Diamagnetism of metallic nanoparticles as a result of strong spin-orbit interaction. <i>Physical Review B</i> , <b>2019</b> , 100,	3.3	1
328	Bandwidth renormalization due to the intersite Coulomb interaction. <i>Journal of Physics Condensed Matter</i> , <b>2019</b> , 31, 465603	1.8	0
327	On the feasibility of saltational evolution. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , <b>2019</b> , 116, 21068-21075	11.5	7
326	Dual boson approach with instantaneous interaction. <i>Physical Review B</i> , <b>2019</b> , 100,	3.3	7

325	Thermodynamics of the metal-insulator transition in the extended Hubbard model. <i>SciPost Physics</i> , <b>2019</b> , 6,	6.1	3
324	Electron-phonon properties, structural stability, and superconductivity of doped antimonene. <i>Physical Review B</i> , <b>2019</b> , 99,	3.3	16
323	Heisenberg-exchange-free nanoskyrmion mosaic. <i>Journal of Physics Condensed Matter</i> , <b>2019</b> , 31, 17LT01	1.8	3
322	Dodecagonal bilayer graphene quasicrystal and its approximants. <i>Npj Computational Materials</i> , <b>2019</b> , 5,	10.9	32
321	Anisotropic Two-Dimensional Screening at the Surface of Black Phosphorus. <i>Physical Review Letters</i> , <b>2019</b> , 123, 216403	7.4	14
320	Measuring the Berry phase of graphene from wavefront dislocations in Friedel oscillations. <i>Nature</i> , <b>2019</b> , 574, 219-222	50.4	18
319	Towards physical principles of biological evolution. <i>Physica Scripta</i> , <b>2018</b> , 93, 043001	2.6	15
318	First-order metal-insulator transitions in the extended Hubbard model due to self-consistent screening of the effective interaction. <i>Physical Review B</i> , <b>2018</b> , 97,	3.3	6
317	Precursors of the insulating state in the square-lattice Hubbard model. <i>Physical Review B</i> , <b>2018</b> , 97,	3.3	20
316	Quantum Monte Carlo study of electrostatic potential in graphene. <i>Physical Review B</i> , <b>2018</b> , 97,	3.3	21
315	Impact of Many-Body Effects on Landau Levels in Graphene. <i>Physical Review Letters</i> , <b>2018</b> , 120, 187701	7.4	12
314	Antiferromagnetic order without recourse to staggered fields. <i>Physical Review B</i> , <b>2018</b> , 98,	3.3	2
313	Competing Coulomb and electron-phonon interactions in NbS <sub>2</sub> . <i>Npj Quantum Materials</i> , <b>2018</b> , 3,	5	20
312	Logical inference derivation of the quantum theoretical description of Stern-Gerlach and Einstein-Podolsky-Rosen-Bohm experiments. <i>Annals of Physics</i> , <b>2018</b> , 396, 96-118	2.5	5
311	Effective Heisenberg Model and Exchange Interaction for Strongly Correlated Systems. <i>Physical Review Letters</i> , <b>2018</b> , 121, 037204	7.4	20
310	Physical foundations of biological complexity. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , <b>2018</b> , 115, E8678-E8687	11.5	46
309	Magnon-assisted tunnelling in van der Waals heterostructures based on CrBr <sub>3</sub> . <i>Nature Electronics</i> , <b>2018</b> , 1, 344-349	28.4	167
308	Non-Heisenberg covalent magnetism in iron oxide clusters. <i>Physical Review Materials</i> , <b>2018</b> , 2,	3.2	4

307	Unconventional mass enhancement around the Dirac nodal loop in ZrSiS. <i>Nature Physics</i> , <b>2018</b> , 14, 178-188.	2	85
306	Holographic local quench and effective complexity. <i>Journal of High Energy Physics</i> , <b>2018</b> , 2018, 1	5.4	28
305	Gate-tunable infrared plasmons in electron-doped single-layer antimony. <i>Physical Review B</i> , <b>2018</b> , 98,	3.3	7
304	Nanoskyrmion engineering with sp-electron materials: Sn monolayer on a SiC(0001) surface. <i>Physical Review B</i> , <b>2018</b> , 98,	3.3	4
303	An orbitally derived single-atom magnetic memory. <i>Nature Communications</i> , <b>2018</b> , 9, 3904	17.4	21
302	Plasmon confinement in fractal quantum systems. <i>Physical Review B</i> , <b>2018</b> , 97,	3.3	16
301	Two-dimensional dispersion of magnetostatic volume spin waves. <i>Journal of Physics Condensed Matter</i> , <b>2018</b> , 30, 255803	1.8	
300	Excitonic Instability and Pseudogap Formation in Nodal Line Semimetal ZrSiS. <i>Physical Review Letters</i> , <b>2018</b> , 120, 216401	7.4	26
299	Density functional based simulations of proton permeation of graphene and hexagonal boron nitride. <i>Physical Chemistry Chemical Physics</i> , <b>2017</b> , 19, 5813-5817	3.6	37
298	Large positive in-plane magnetoresistance induced by localized states at nanodomain boundaries in graphene. <i>Nature Communications</i> , <b>2017</b> , 8, 14453	17.4	23
297	Theory of plasmonic effects in nonlinear optics: The case of graphene. <i>Physical Review B</i> , <b>2017</b> , 95,	3.3	39
296	Simultaneous loss of interlayer coherence and long-range magnetism in quasi-two-dimensional PdCrO. <i>Nature Communications</i> , <b>2017</b> , 8, 15001	17.4	11
295	Probing Single Vacancies in Black Phosphorus at the Atomic Level. <i>Nano Letters</i> , <b>2017</b> , 17, 3607-3612	11.5	84
294	Towards the ab initio based theory of phase transformations in iron and steel. <i>Physics of Metals and Metallography</i> , <b>2017</b> , 118, 362-388	1.2	21
293	Coulomb interactions and screening effects in few-layer black phosphorus: a tight-binding consideration beyond the long-wavelength limit. <i>2D Materials</i> , <b>2017</b> , 4, 025064	5.9	21
292	Dynamical control of electron-phonon interactions with high-frequency light. <i>Physical Review B</i> , <b>2017</b> , 95,	3.3	9
291	Band Filling Control of the Dzyaloshinskii-Moriya Interaction in Weakly Ferromagnetic Insulators. <i>Physical Review Letters</i> , <b>2017</b> , 119, 167201	7.4	26
290	Inevitability of the emergence and persistence of genetic parasites caused by evolutionary instability of parasite-free states. <i>Biology Direct</i> , <b>2017</b> , 12, 31	7.2	35

289	Exchange interactions in transition metal oxides: the role of oxygen spin polarization. <i>Journal of Physics Condensed Matter</i> , <b>2017</b> , 29, 335801	1.8	15
288	The Bethe-Slater curve revisited; new insights from electronic structure theory. <i>Scientific Reports</i> , <b>2017</b> , 7, 4058	4.9	20
287	Mechanics of thermally fluctuating membranes. <i>Npj 2D Materials and Applications</i> , <b>2017</b> , 1,	8.8	26
286	Extended Tersoff potential for boron nitride: Energetics and elastic properties of pristine and defective h-BN. <i>Physical Review B</i> , <b>2017</b> , 96,	3.3	60
285	Dynamical and Reversible Control of Topological Spin Textures. <i>Physical Review Letters</i> , <b>2017</b> , 118, 157201	11.5	31
284	Disentangling the effects of selection and loss bias on gene dynamics. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , <b>2017</b> , 114, E5616-E5624	11.5	30
283	Optical conductivity of a quantum electron gas in a Sierpinski carpet. <i>Physical Review B</i> , <b>2017</b> , 96,	3.3	15
282	Observing Imperfection in Atomic Interfaces for van der Waals Heterostructures. <i>Nano Letters</i> , <b>2017</b> , 17, 5222-5228	11.5	39
281	Standard model of the rare earths analyzed from the Hubbard I approximation. <i>Physical Review B</i> , <b>2016</b> , 94,	3.3	45
280	Quantum elasticity of graphene: Thermal expansion coefficient and specific heat. <i>Physical Review B</i> , <b>2016</b> , 94,	3.3	37
279	Self-Induced Glassiness and Pattern Formation in Spin Systems Subject to Long-Range Interactions. <i>Physical Review Letters</i> , <b>2016</b> , 117, 137201	7.4	8
278	Self-consistent dual boson approach to single-particle and collective excitations in correlated systems. <i>Physical Review B</i> , <b>2016</b> , 93,	3.3	35
277	Stripe glasses in ferromagnetic thin films. <i>Physical Review B</i> , <b>2016</b> , 93,	3.3	9
276	Quantum transport in Sierpinski carpets. <i>Physical Review B</i> , <b>2016</b> , 93,	3.3	44
275	Double occupancy in dynamical mean-field theory and the dual boson approach. <i>Physical Review B</i> , <b>2016</b> , 93,	3.3	23
274	Laser-induced topological transitions in phosphorene with inversion symmetry. <i>Physical Review B</i> , <b>2016</b> , 93,	3.3	42
273	Microscopic Origin of Heisenberg and Non-Heisenberg Exchange Interactions in Ferromagnetic bcc Fe. <i>Physical Review Letters</i> , <b>2016</b> , 116, 217202	7.4	48
272	Intrinsic Charge Carrier Mobility in Single-Layer Black Phosphorus. <i>Physical Review Letters</i> , <b>2016</b> , 116, 246401	7.4	95



271	Structural and Electronic Properties of Germanene on MoS <sub>2</sub> . <i>Physical Review Letters</i> , <b>2016</b> , 116, 256804	7.4	260
270	Racah Materials: Role of Atomic Multiplets and Intermediate Valence in f-Electron Systems. <i>MRS Advances</i> , <b>2016</b> , 1, 2967-2974	0.7	1
269	Decoherence wave in magnetic systems and creation of Néel antiferromagnetic state by measurement. <i>Physical Review B</i> , <b>2016</b> , 93,	3.3	7
268	Scaling Behavior and Strain Dependence of In-Plane Elastic Properties of Graphene. <i>Physical Review Letters</i> , <b>2016</b> , 116, 015901	7.4	87
267	Chirality-Dependent Transmission of Spin Waves through Domain Walls. <i>Physical Review Letters</i> , <b>2016</b> , 116, 147204	7.4	29
266	Phonon-Assisted Resonant Tunneling of Electrons in Graphene-Boron Nitride Transistors. <i>Physical Review Letters</i> , <b>2016</b> , 116, 186603	7.4	63
265	Macroscopic self-reorientation of interacting two-dimensional crystals. <i>Nature Communications</i> , <b>2016</b> , 7, 10800	17.4	86
264	Edge Plasmons in Two-Component Electron Liquids in the Presence of Pseudomagnetic Fields. <i>Physical Review Letters</i> , <b>2016</b> , 117, 196803	7.4	19
263	Capturing nonlocal interaction effects in the Hubbard model: Optimal mappings and limits of applicability. <i>Physical Review B</i> , <b>2016</b> , 94,	3.3	14
262	From local to nonlocal correlations: The Dual Boson perspective. <i>Physical Review B</i> , <b>2016</b> , 94,	3.3	19
261	Energetics, barriers and vibrational spectra of partially and fully hydrogenated hexagonal boron nitride. <i>Physical Chemistry Chemical Physics</i> , <b>2016</b> , 18, 19359-67	3.6	10
260	Spectroscopic metrics allow in situ measurement of mean size and thickness of liquid-exfoliated few-layer graphene nanosheets. <i>Nanoscale</i> , <b>2016</b> , 8, 4311-23	7.7	142
259	Anomalous Magnetothermopower in a Metallic Frustrated Antiferromagnet. <i>Physical Review Letters</i> , <b>2016</b> , 116, 087202	7.4	15
258	Production of Highly Monolayer Enriched Dispersions of Liquid-Exfoliated Nanosheets by Liquid Cascade Centrifugation. <i>ACS Nano</i> , <b>2016</b> , 10, 1589-601	16.7	271
257	Role of direct exchange and Dzyaloshinskii-Moriya interactions in magnetic properties of graphene derivatives: C <sub>2</sub> F and C <sub>2</sub> H. <i>Physical Review B</i> , <b>2016</b> , 94,	3.3	40
256	Spin-orbit coupling and magnetic interactions in Si(111):(C,Si,Sn,Pb). <i>Physical Review B</i> , <b>2016</b> , 94,	3.3	15
255	Plaquette valence bond theory of high-temperature superconductivity. <i>Physical Review B</i> , <b>2016</b> , 94,	3.3	13
254	Nonequilibrium itinerant-electron magnetism: A time-dependent mean-field theory. <i>Physical Review B</i> , <b>2016</b> , 94,	3.3	5

253	A new 2D monolayer BiXene, M <sub>2</sub> C (M = Mo, Tc, Os). <i>Nanoscale</i> , <b>2016</b> , 8, 15753-62	7.7	35
252	Relaxation of moiré patterns for slightly misaligned identical lattices: graphene on graphite. <i>2D Materials</i> , <b>2015</b> , 2, 034010	5.9	114
251	Quantum theory as a description of robust experiments: Derivation of the Pauli equation. <i>Annals of Physics</i> , <b>2015</b> , 359, 166-186	2.5	13
250	Phonon-pump extreme-ultraviolet-photoemission probe in graphene: anomalous heating of Dirac carriers by lattice deformation. <i>Physical Review Letters</i> , <b>2015</b> , 114, 125503	7.4	19
249	Misfit stabilized embedded nanoparticles in metallic alloys. <i>Physical Chemistry Chemical Physics</i> , <b>2015</b> , 17, 27249-57	3.6	13
248	Germanene: the germanium analogue of graphene. <i>Journal of Physics Condensed Matter</i> , <b>2015</b> , 27, 4430028	10.2	205
247	The most incompressible metal osmium at static pressures above 750 gigapascals. <i>Nature</i> , <b>2015</b> , 525, 226-9	50.4	121
246	Ultrafast optical modification of exchange interactions in iron oxides. <i>Nature Communications</i> , <b>2015</b> , 6, 8190	17.4	125
245	Increasing the elastic modulus of graphene by controlled defect creation. <i>Nature Physics</i> , <b>2015</b> , 11, 26-31	16.2	235
244	Science and technology roadmap for graphene, related two-dimensional crystals, and hybrid systems. <i>Nanoscale</i> , <b>2015</b> , 7, 4598-810	7.7	2015
243	Exchange parameters of strongly correlated materials: Extraction from spin-polarized density functional theory plus dynamical mean-field theory. <i>Physical Review B</i> , <b>2015</b> , 91,	3.3	64
242	Ultralong-range order in the Fermi-Hubbard model with long-range interactions. <i>Physical Review B</i> , <b>2015</b> , 92,	3.3	15
241	Toward a realistic description of multilayer black phosphorus: From GW approximation to large-scale tight-binding simulations. <i>Physical Review B</i> , <b>2015</b> , 92,	3.3	146
240	Magnetism and Interaction-Induced Gap Opening in Graphene with Vacancies or Hydrogen Adatoms: Quantum Monte Carlo Study. <i>Physical Review Letters</i> , <b>2015</b> , 114, 246801	7.4	42
239	Effect of Structural Relaxation on the Electronic Structure of Graphene on Hexagonal Boron Nitride. <i>Physical Review Letters</i> , <b>2015</b> , 115, 186801	7.4	68
238	Dirac points with giant spin-orbit splitting in the electronic structure of two-dimensional transition-metal carbides. <i>Physical Review B</i> , <b>2015</b> , 92,	3.3	47
237	Effective Hamiltonians for Rapidly Driven Many-Body Lattice Systems: Induced Exchange Interactions and Density-Dependent Hoppings. <i>Physical Review Letters</i> , <b>2015</b> , 115, 075301	7.4	57
236	Racah materials: role of atomic multiplets in intermediate valence systems. <i>Scientific Reports</i> , <b>2015</b> , 5, 15429	4.9	16

235	Chemical modifications and stability of phosphorene with impurities: a first principles study. <i>Physical Chemistry Chemical Physics</i> , <b>2015</b> , 17, 15209-17	3.6	66
234	Probing of valley polarization in graphene via optical second-harmonic generation. <i>Physical Review B</i> , <b>2015</b> , 91,	3.3	30
233	Measuring the DzyaloshinskiiMoriya interaction in a weak ferromagnet. <i>Nature Physics</i> , <b>2014</b> , 10, 202-206	6.2	111
232	Many-body renormalization of the minimal conductivity in graphene. <i>Physical Review Letters</i> , <b>2014</b> , 112, 116604	7.4	20
231	CommensurateIncommensurate transition in graphene on hexagonal boron nitride. <i>Nature Physics</i> , <b>2014</b> , 10, 451-456	16.2	582
230	Topological Matter: Graphene and Superfluid ( <sup>3</sup> He). <i>Journal of Low Temperature Physics</i> , <b>2014</b> , 175, 655-666	1.3	4
229	Phonons and electron-phonon coupling in graphene-h-BN heterostructures. <i>Annalen Der Physik</i> , <b>2014</b> , 526, 381-386	2.6	31
228	Quantum capacitance and Landau parameters of massless Dirac fermions in graphene. <i>Annalen Der Physik</i> , <b>2014</b> , 526, 359-365	2.6	11
227	First-principles modeling of magnetic excitations in Mn12. <i>Physical Review B</i> , <b>2014</b> , 89,	3.3	30
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1 Towards physical principles of biological evolution

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