

# Sergey Krishtopenko

## List of Publications by Year in descending order

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66  
papers

833  
citations

471477

17  
h-index

526264

27  
g-index

67  
all docs

67  
docs citations

67  
times ranked

469  
citing authors

#	ARTICLE	IF	CITATIONS
1	Temperature-driven massless Kane fermions in HgCdTe crystals. Nature Communications, 2016, 7, 12576.	12.8	73
2	Pressure- and temperature-driven phase transitions in HgTe quantum wells. Physical Review B, 2016, 94, .	3.2	57
3	HgCdTe-based heterostructures for terahertz photonics. APL Materials, 2017, 5, .	5.1	49
4	Temperature-Induced Topological Phase Transition in HgTe Quantum Wells. Physical Review Letters, 2018, 120, 086401.	7.8	43
5	Phase transitions in two tunnel-coupled HgTe quantum wells: Bilayer graphene analogy and beyond. Scientific Reports, 2016, 6, 30755.	3.3	42
6	Temperature-driven single-valley Dirac fermions in HgTe quantum wells. Physical Review B, 2017, 96, .	3.2	38
7	Quantum spin Hall insulator with a large bandgap, Dirac fermions, and bilayer graphene analog. Science Advances, 2018, 4, eaap7529.	10.3	32
8	Exchange enhancement of the g factor in InAs/AlSb heterostructures. Semiconductors, 2008, 42, 828-833.	0.5	31
9	Realistic picture of helical edge states in HgTe quantum wells. Physical Review B, 2018, 97, .	3.2	29
10	Persistent photoconductivity in InAs/AlSb heterostructures with double quantum wells. Semiconductors, 2010, 44, 616-622.	0.5	24
11	Temperature-dependent terahertz spectroscopy of inverted-band three-layer InAs/GaSb/InAs quantum well. Physical Review B, 2018, 97, .	3.2	24
12	Splitting of Cyclotron Resonance Line in InAs/AlSb QW Heterostructures in High Magnetic Fields: Effects of Electron-Electron and Electron-Phonon Interaction. Journal of Low Temperature Physics, 2010, 159, 197-202.	1.4	22
13	Temperature-dependent magnetospectroscopy of HgTe quantum wells. Physical Review B, 2016, 94, .	3.2	21
14	Electron-electron interaction and spin-orbit coupling in InAs/AlSb heterostructures with a two-dimensional electron gas. Semiconductors, 2011, 45, 110-117.	0.5	20
15	Theory of $g$ -factor enhancement in narrow-gap quantum well heterostructures. Journal of Physics Condensed Matter, 2011, 23, 385601.	1.8	19
16	Features of the persistent photoconductivity in InAs/AlSb heterostructures with double quantum wells and a tunneling-transparent barrier. Semiconductors, 2012, 46, 1396-1401.	0.5	18
17	Rashba spin splitting and exchange enhancement of the $g$ factor in InAs/AlSb heterostructures with a two-dimensional electron gas. Semiconductors, 2012, 46, 1163-1170.	0.5	18
18	Cyclotron resonance study in InAs/AlSb quantum well heterostructures with two occupied electronic subbands. Journal of Applied Physics, 2012, 111, 093711.	2.5	16

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19	Effect of electron-electron interaction on cyclotron resonance in high-mobility InAs/AlSb quantum wells. Journal of Applied Physics, 2015, 117, 112813.	2.5	16
20	Magneto-transport in inverted HgTe quantum wells. Npj Quantum Materials, 2019, 4, .	5.2	16
21	Spin-wave excitations and electron spin resonance in symmetric and asymmetric narrow-gap quantum wells. Physical Review B, 2013, 87, .	3.2	14
22	Massless Dirac fermions in III-V semiconductor quantum wells. Physical Review B, 2019, 99, .	3.2	14
23	Terahertz detection of magnetic field-driven topological phase transition in HgTe-based transistors. Applied Physics Letters, 2015, 107, .	3.3	13
24	Terahertz imaging of Landau levels in HgTe-based topological insulators. Applied Physics Letters, 2016, 108, .	3.3	13
25	Exchange Enhancement of g-Factor in Narrow-Gap InAs/AlSb Quantum Well Heterostructures. Solid State Phenomena, 2012, 190, 554-557.	0.3	12
26	HgTe/CdHgTe double quantum well with a spectrum of bilayer graphene and peculiarities of its magnetotransport. JETP Letters, 2016, 104, 403-410.	1.4	11
27	Disorder-induced phase transition in Dirac systems beyond the linear approximation. Physical Review B, 2020, 101, .	3.2	10
28	The effect of exchange interaction on quasiparticle Landau levels in narrow-gap quantum well heterostructures. Journal of Physics Condensed Matter, 2012, 24, 135601.	1.8	9
29	Magneto-spectroscopy of double HgTe/CdHgTe quantum wells. Semiconductors, 2016, 50, 1532-1538.	0.5	9
30	Unconventional reentrant quantum Hall effect in a HgTe/CdHgTe double quantum well. Physical Review B, 2020, 102, .	3.2	9
31	Exchange interaction effects in electron spin resonance: Larmor theorem violation in narrow-gap quantum well heterostructures. Journal of Physics Condensed Matter, 2012, 24, 252201.	1.8	8
32	On the band spectrum in p-type HgTe/CdHgTe heterostructures and its transformation under temperature variation. Semiconductors, 2017, 51, 1531-1536.	0.5	8
33	Band splitting in $\text{CdMnTe}$ quantum wells measured by magnetotransport. Physical Review B, 2018, 97, .	3.3	8
34	Rashba spin splitting and cyclotron resonance in strained InGaAs/InP heterostructures with a two-dimensional electron gas. Semiconductors, 2013, 47, 1485-1491.	0.5	7
35	Magneto-spectroscopy of double HgTe/CdHgTe QWs with inverted band structure in high magnetic fields up to 30 T. Opto-electronics Review, 2019, 27, 213-218.	2.4	7
36	Exchange enhancement of the electron g-factor in a two-dimensional semimetal in HgTe quantum wells. Semiconductors, 2015, 49, 1627-1633.	0.5	6

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37	Hybridization of topological surface states with a flat band. Journal of Physics Condensed Matter, 2020, 32, 165501.	1.8	6
38	Many-body effects in electron spin resonance in 2D systems with Rashba spin-orbit interaction. Semiconductor Science and Technology, 2014, 29, 085005.	2.0	5
39	Exchange enhancement of the electron g factor in strained InGaAs/InP heterostructures. Semiconductors, 2015, 49, 191-198.	0.5	5
40	Magnetoabsorption of Dirac Fermions in InAs/GaSb/InAs "Three-Layer" Gapless Quantum Wells. JETP Letters, 2017, 106, 727-732.	1.4	5
41	Higher-order topological insulator in cubic semiconductor quantum wells. Scientific Reports, 2021, 11, 21060.	3.3	5
42	Magnetoplasmon excitations from integer-filled Landau levels in narrow-gap quantum wells. Journal of Physics Condensed Matter, 2013, 25, 365602.	1.8	4
43	Polarization-Sensitive Fourier-Transform Spectroscopy of HgTe/CdHgTe Quantum Wells in the Far Infrared Range in a Magnetic Field. JETP Letters, 2018, 108, 329-334.	1.4	4
44	Terahertz Spectroscopy of Two-Dimensional Semimetal in Three-Layer InAs/GaSb/InAs Quantum Well. JETP Letters, 2019, 109, 96-101.	1.4	4
45	Electron spin resonance and cyclotron resonance for fractional quantum Hall states in narrow-gap QW heterostructures. Journal of Physics Condensed Matter, 2013, 25, 105601.	1.8	3
46	Cyclotron resonance of Dirac fermions in InAs/GaSb/InAs quantum wells. Semiconductors, 2017, 51, 38-42.	0.5	3
47	On the Thermal Activation of Conductivity Electrons in a p-Type HgTe/CdHgTe Double Quantum Well with HgTe Layers of Critical Width. Semiconductors, 2019, 53, 919-922.	0.5	3
48	Spin splitting of surface states in HgTe quantum wells. Low Temperature Physics, 2019, 45, 159-164.	0.6	3
49	Many-particle effects in optical transitions from zero-mode Landau levels in HgTe quantum wells. Physical Review B, 2020, 102, .	3.2	3
50	Relativistic collapse of Landau levels of Kane fermions in crossed electric and magnetic fields. Physical Review B, 2022, 105, .	3.2	3
51	Effects of the electron-electron interaction in the spin resonance in 2D systems with Dresselhaus spin-orbit coupling. Semiconductors, 2015, 49, 174-180.	0.5	2
52	Observation of topological phase transition by terahertz photoconductivity in HgTe-based transistors. Physica Status Solidi C: Current Topics in Solid State Physics, 2016, 13, 534-537.	0.8	2
53	Temperature-driven massless Kane fermions in HgCdTe crystals. , 2016, , .		2
54	Effects of Rashba spin splitting and exchange interaction in electron spin resonance in narrow-gap quantum well heterostructures. Journal of Physics: Conference Series, 2013, 456, 012021.	0.4	1

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55	Quantum Hall states in inverted HgTe quantum wells probed by transconductance fluctuations. Physical Review B, 2020, 102, .	3.2	1
56	Photoluminescence Spectra of InAs/GalnSb/InAs Quantum Wells in the Mid-Infrared Region. Semiconductors, 2020, 54, 1119-1122.	0.5	1
57	Effects of the Electron- $\pi$ Electron Interaction in the Magneto-Absorption Spectra of HgTe/CdHgTe Quantum Wells with an Inverted Band Structure. JETP Letters, 2020, 112, 508-512.	1.4	1
58	Exchange interaction and rashba spin splitting effects in electron spin resonance in narrow-gap quantum wells. , 2013, , .		0
59	Exchange enhancement of quasiparticle and ESR spin-gap in symmetric and asymmetric narrow-gap quantum wells. Journal of Physics: Conference Series, 2013, 461, 012037.	0.4	0
60	Cyclotron resonance in InAs/AlSb quantum wells in magnetic fields up to 45 T. Semiconductors, 2015, 49, 1616-1622.	0.5	0
61	Terahertz cyclotron emission from HgCdTe bulk films. , 2016, , .		0
62	THz magnetospectroscopy of double HgTe quantum well. , 2016, , .		0
63	Activation conductivity in HgTe/CdHgTe quantum wells at integer Landau level filling factors: Role of the random potential. Semiconductors, 2017, 51, 1562-1570.	0.5	0
64	Terahertz probing of temperature-driven topological phase transition in HgCdTe bulk crystal and HgTe Quantum Well. , 2017, , .		0
65	Terahertz magnetospectroscopy of pseudo-relativistic fermions in HgCdTe alloys under hydrostatic pressure. , 2021, , .		0
66	Temperature-driven massless fermions in HgCdTe heterostructures. , 2017, , .		0