

# Seongshik Oh

## List of Publications by Year in descending order

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107  
papers

6,302  
citations

101384

36  
h-index

66788

78  
g-index

109  
all docs

109  
docs citations

109  
times ranked

6525  
citing authors

#	ARTICLE	IF	CITATIONS
1	Decoherence in Josephson Qubits from Dielectric Loss. Physical Review Letters, 2005, 95, 210503.	2.9	616
2	Observation of Dirac plasmons in a topological insulator. Nature Nanotechnology, 2013, 8, 556-560.	15.6	332
3	Thickness-Independent Transport Channels in Topological Insulator Thickness-dependent bulk properties and weak anti-localization effect in topological insulator Bi <sub>2</sub> Se <sub>3</sub> Physical Review Letters, 2015, 114, 257202.	2.9	306
4	Topological Surface States Originated Spin-Orbit Torques in Bi <sub>2</sub> Se <sub>3</sub> Physical Review Letters, 2015, 114, 257202.	1.1	270
5	Simultaneous State Measurement of Coupled Josephson Phase Qubits. Science, 2005, 307, 1299-1302.	2.9	269
6	Quantized Faraday and Kerr rotation and axion electrodynamics of a 3D topological insulator. Science, 2016, 354, 1124-1127.	6.0	263
7	Signature of Superfluid Density in the Single-Particle Excitation Spectrum of Bi <sub>2</sub> Sr <sub>2</sub> CaCu <sub>2</sub> O <sub>8</sub> + $\delta$ . Science, 2000, 289, 277-281.	6.0	240
8	A sudden collapse in the transport lifetime across the topological phase transition in (Bi <sub>1-x</sub> In <sub>x</sub> ) <sub>2</sub> Se <sub>3</sub> . Nature Physics, 2013, 9, 410-414.	6.5	206
9	Terahertz Response and Colossal Kerr Rotation from the Surface States of the Topological Insulator Physical Review Letters, 2012, 108, 087403.	2.9	201
10	Observation of Quantum Oscillations between a Josephson Phase Qubit and a Microscopic Resonator Using Fast Readout. Physical Review Letters, 2004, 93, 180401.	2.9	189
11	Topological-Metal to Band-Insulator Transition in Bi <sub>2</sub> Se <sub>3</sub> Films. Physical Review Letters, 2012, 109, 186403.	2.9	184
12	Epitaxial growth of topological insulator Bi <sub>2</sub> Se <sub>3</sub> film on Si(111) with atomically sharp interface. Thin Solid Films, 2011, 520, 224-229.	0.8	180
13	Observation of inverse spin Hall effect in bismuth selenide. Physical Review B, 2014, 90, .	1.1	158
14	Strong nonlinear terahertz response induced by Dirac surface states in Bi <sub>2</sub> Se <sub>3</sub> topological insulator. Nature Communications, 2016, 7, 11421.	5.8	124
15	Record Surface State Mobility and Quantum Hall Effect in Topological Insulator Thin Films via Interface Engineering. Nano Letters, 2015, 15, 8245-8249.	4.5	119
16	Mapping the orbital wavefunction of the surface states in three-dimensional topological insulators. Nature Physics, 2013, 9, 499-504.	6.5	118
17	Transport properties of topological insulators: Band bending, bulk metal-to-insulator transition, and weak anti-localization. Solid State Communications, 2015, 215-216, 54-62.	0.9	115

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19	Nodal Quasiparticle Lifetime in the Superconducting State of $\text{Bi}_2\text{Sr}_2\text{CaCu}_2\text{O}_{8+\delta}$ . Physical Review Letters, 2000, 85, 2569-2572.	2.9	105
20	Emergence of Decoupled Surface Transport Channels in Bulk Insulating $\text{Bi}_2\text{Se}_3$ Topological Insulator. Physical Review Letters, 2014, 113, 026801.	2.9	101
21	Colossal magnetoresistance magnetic tunnel junctions grown by molecular-beam epitaxy. Applied Physics Letters, 2000, 76, 1914-1916.	1.5	96
22	Ultrafast terahertz dynamics of hot Dirac-electron surface scattering in the topological insulator $\text{Bi}_2\text{Se}_3$ . Physical Review B, 2014, 89, .	1.5	89
23	Ultra-high modulation depth exceeding 2,400% in optically controlled topological surface plasmons. Nature Communications, 2015, 6, 8814.	5.8	76
24	Surface versus bulk state in topological insulator $\text{Bi}_2\text{Se}_3$ under environmental disorder. Applied Physics Letters, 2011, 99, .	1.5	73
25	Plasmon-Phonon Interactions in Topological Insulator Microrings. Advanced Optical Materials, 2015, 3, 1257-1263.	3.6	72
26	Highly Sensitive, Gate-Tunable, Room-Temperature Mid-Infrared Photodetection Based on Graphene/ $\text{Bi}_2\text{Se}_3$ Heterostructure. ACS Photonics, 2017, 4, 482-488.	3.2	70
27	High-Resolution Faraday Rotation and Electron-Phonon Coupling in Surface States of the Bulk-Insulating Topological Insulator $\text{Bi}_2\text{Se}_3$ . Physical Review Letters, 2015, 115, 217602.	2.9	64
28	Time-resolved terahertz dynamics in thin films of the topological insulator $\text{Bi}_2\text{Se}_3$ . Applied Physics Letters, 2015, 106, .	1.5	61
29	Efficient charge-spin conversion and magnetization switching through the Rashba effect at topological-insulator/Ag interfaces. Physical Review B, 2018, 97, .	1.1	53
30	Observation of Magnetoplasmons in $\text{Bi}_2\text{Se}_3$ Topological Insulator. ACS Photonics, 2015, 2, 1231-1235.	3.2	48
31	A novel artificial condensed matter lattice and a new platform for one-dimensional topological phases. Science Advances, 2017, 3, e1501692.	4.7	48
32	The Complete Quantum Hall Trio. Science, 2013, 340, 153-154.	6.0	44
33	Control over Electron-Phonon Interaction by Dirac Plasmon Engineering in the $\text{Bi}_2\text{Se}_3$ Topological Insulator. Nano Letters, 2018, 18, 734-739.	4.5	39
34	Towards the understanding of the origin of charge-current-induced spin voltage signals in the topological insulator $\text{Bi}_2\text{Se}_3$ . Physical Review B, 2015, 92, .	1.1	38
35	Surface vibrational modes of the topological insulator $\text{Bi}_2\text{Se}_3$ observed by Raman spectroscopy. Physical Review B, 2017, 95, .	2.1	38
36	Doping Controlled Superconductor-Insulator Transition in $\text{Bi}_2\text{Sr}_2\text{CaCu}_2\text{O}_{8+\delta}$ . Physical Review Letters, 2006, 96, 107003.	2.9	37

#	ARTICLE	IF	CITATIONS
37	Fano quantum-interference dynamics using a topological phase transition in $\text{PdCoO}_2$ . Physical Review Letters, 2019, 122, 127201.	1.1	37
38	Growth of metallic delafossite $\text{PdCoO}_2$ by molecular beam epitaxy. Physical Review Materials, 2019, 3, .	0.9	35
39	Record High-Proximity-Induced Anomalous Hall Effect in $(\text{BiSb})_2\text{Te}_3$ Thin Film Grown on $\text{CrGeTe}_3$ Substrate. Nano Letters, 2019, 19, 4567-4573.	4.5	34
40	Signature of a topological phase transition in the Josephson supercurrent through a topological insulator. Physical Review B, 2016, 93, .	1.1	33
41	Conductance modulation in topological insulator $\text{Bi}_2\text{Se}_3$ thin films with ionic liquid gating. Applied Physics Letters, 2013, 103, .	1.5	32
42	Restoring pristine $\text{Bi}_2\text{Se}_3$ surfaces with an effective Se decapping process. Nano Research, 2015, 8, 1222-1228.	5.8	32
43	Finite-Size and Composition-Driven Topological Phase Transition in $(\text{Bi}_{1-x}\text{In}_x)_2\text{Se}_3$ Thin Films. Nano Letters, 2016, 16, 5528-5532.	4.5	31
44	Direct visualization of current-induced spin accumulation in topological insulators. Nature Communications, 2018, 9, 2492.	5.8	30
45	Aging and reduced bulk conductance in thin films of the topological insulator $\text{Bi}_2\text{Se}_3$ . Journal of Applied Physics, 2013, 113, .	1.1	29
46	Transferring MBE-Grown Topological Insulator Films to Arbitrary Substrates and Metal-Insulator Transition via Dirac Gap. Nano Letters, 2014, 14, 1343-1348.	4.5	29
47	Solution to the Hole-Doping Problem and Tunable Quantum Hall Effect in $\text{Bi}_2\text{Se}_3$ Thin Films. Nano Letters, 2018, 18, 820-826.	4.5	29
48	Robust topological surface states of $\text{Bi}_2\text{Se}_3$ thin films on amorphous $\text{SiO}_2/\text{Si}$ substrate and a large ambipolar gating effect. Applied Physics Letters, 2014, 104, .	1.5	28
49	<i>In situ</i> study of emerging metallicity on ion-bombarded $\text{SrTiO}_3$ surface. Journal of Applied Physics, 2011, 110, .	1.1	27
50	Terahertz Tuning of Dirac Plasmons in $\text{Bi}_2\text{Se}_3$ Topological Insulator. Physical Review Letters, 2020, 124, 226403.	1.92	27
51	Low-leakage superconducting tunnel junctions with a single-crystal $\text{Al}_2\text{O}_3$ barrier. Superconductor Science and Technology, 2005, 18, 1396-1399.	1.8	25
52	Dirac cone shift of a passivated topological $\text{Bi}_2\text{Se}_3$ interface state. Physical Review B, 2013, 87, .	1.1	23
53	Sr flux stability against oxidation in oxide-molecular-beam-epitaxy environment: Flux, geometry, and pressure dependence. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 2010, 28, 271-276.	0.9	22
54	Indium and bismuth interdiffusion and its influence on the mobility in $\text{In}_2\text{Se}_3/\text{Bi}_2\text{Se}_3$ . Thin Solid Films, 2014, 556, 322-324.	0.8	22

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55	Stability of low-carrier-density topological-insulator $\text{Bi}_2\text{Se}_3$ thin films and effect of capping layers. APL Materials, 2015, 3, 091101.	2.2	22
56	Ion beam modification of topological insulator bismuth selenide. Applied Physics Letters, 2014, 105, .	1.5	21
57	Tunable inverse topological heterostructure utilizing $\text{Bi}_2\text{Se}_3$ thin films. xmlns:mml="http://www.w3.org/1998/Math/MathML" <mml:mrow> <mml:msub> <mml:mrow> <mml:mo> (</mml:mo> <mml:mrow> <mml:mi> B</mml:mi> <mml:msub> <mml:mi> i</mml:mi> <mml:mn> 2</mml:mn> </mml:msub> <mml:mi> S</mml:mi> <mml:msub> <mml:mi> e</mml:mi> <mml:mn> 3</mml:mn> </mml:msub> </mml:mrow> </mml:math> films.	1.1	21
58	Helicity-Dependent Photovoltaic Effect in $\text{Bi}_2\text{Se}_3$ Under Normal Incident Light. Advanced Optical Materials, 2016, 4, 1642-1650.	3.6	21
59	Disorder-driven topological phase transition in $\text{Bi}_2\text{Se}_3$ thin films. xmlns:mml="http://www.w3.org/1998/Math/MathML" <mml:mrow> <mml:mi> B</mml:mi> <mml:msub> <mml:mi> i</mml:mi> <mml:mn> 2</mml:mn> </mml:msub> <mml:mi> S</mml:mi> <mml:msub> <mml:mi> e</mml:mi> <mml:mn> 3</mml:mn> </mml:msub> </mml:mrow> </mml:math> films.	1.1	19
60	Terahertz plasmonic excitations in $\text{Bi}_2\text{Se}_3$ topological insulator. Journal of Physics Condensed Matter, 2017, 29, 183002.	0.7	19
61	Coexistence of bulk and surface states probed by Shubnikov-de Haas oscillations in $\text{Bi}_2\text{Se}_3$ with high charge-carrier density. Physical Review B, 2017, 96, .	1.1	19
62	Quantum Hall to Insulator Transition in Ultra-Low-Carrier-Density Topological Insulator Films and a Hidden Phase of the Zeroth Landau Level. Advanced Materials, 2019, 31, e1901091.	11.1	19
63	Picosecond Competing Dynamics of Apparent Semiconducting-Metallic Phase Transition in the Topological Insulator $\text{Bi}_2\text{Se}_3$ . ACS Photonics, 2020, 7, 759-764.	3.2	19
64	Crucible aperture: An effective way to reduce source oxidation in oxide molecular beam epitaxy process. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 2010, 28, 600-602.	0.9	16
65	Giant plateau in the terahertz Faraday angle in gated $\text{Bi}_2\text{Se}_3$ thin films. xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline" <mml:msub> <mml:mrow /> <mml:mn> 2</mml:mn> </mml:msub> </mml:math> Se<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline" <mml:msub> <mml:mrow /> <mml:mn> 3</mml:mn> </mml:msub> </mml:math> . Physical Review B, 2012, 86, .	1.1	15
66	Epitaxial growth of rhenium with sputtering. Thin Solid Films, 2006, 496, 389-394.	0.8	14
67	Efficient resistive memory effect on $\text{SrTiO}_3$ by ionic-bombardment. Applied Physics Letters, 2011, 99, 092105.	1.5	14
68	Resonance effects in thickness-dependent ultrafast carrier and phonon dynamics of topological insulator $\text{Bi}_2\text{Se}_3$ . Nanotechnology, 2016, 27, 045705.	1.3	13
69	Topologically protected Dirac plasmons and their evolution across the quantum phase transition in a $(\text{Bi}_{1-x}\text{In}_x)_2\text{Se}_3$ topological insulator. Nanoscale, 2016, 8, 4667-4671.	2.8	13
70	Electric field modulated topological magnetoelectric effect in $\text{Bi}_2\text{Se}_3$ . xmlns:mml="http://www.w3.org/1998/Math/MathML" <mml:mrow> <mml:msub> <mml:mi> Bi</mml:mi> <mml:mn> 2</mml:mn> </mml:msub> </mml:mrow> </mml:math> . Physical Review B, 2018, 98, .	1.1	13
71	Ferromagnetic Anomalous Hall Effect in Cr-Doped $\text{Bi}_2\text{Se}_3$ Thin Films via Surface-State Engineering. Nano Letters, 2019, 19, 3409-3414.	4.5	13
72	Surface and interface states of $\text{Bi}_2\text{Se}_3$ thin films investigated by optical second-harmonic generation and terahertz emission. Applied Physics Letters, 2016, 108, 051609.	1.5	12

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73	Composition Control of Plasmon-Phonon Interaction Using Topological Quantum-Phase Transition in Photoexcited $\text{Bi}_2\text{Se}_3$ . ACS Photonics, 2016, 3, 1426-1431.	3.2	12
74	Infinite-layer $(\text{Ca}_{1-x}\text{Sr}_x\text{CuO}_2)$ film growth by molecular beam epitaxy and effect of hole doping. Thin Solid Films, 2005, 483, 301-305.	0.8	11
75	Tuning and stabilizing topological insulator $\text{Bi}_2\text{Se}_3$ in the intrinsic regime by charge extraction with organic overlayers. Applied Physics Letters, 2016, 108, .	1.5	11
76	Correlated plasmons in the topological insulator $\text{Bi}_2\text{Se}_3$ induced by long-range electron correlations. NPG Asia Materials, 2020, 12, .	3.8	11
77	Anisotropic Terahertz Emission from $\text{Bi}_2\text{Se}_3$ Thin Films with Inclined Crystal Planes. Nanoscale Research Letters, 2015, 10, 489.	3.1	10
78	Gate-tunable quantum Hall effects in defect-suppressed $\text{Bi}_2\text{Se}_3$ thin films.	1.1	9
79	Electron-Hole Asymmetry of Surface States in Topological Insulator $\text{Sb}_2\text{Te}_3$ Thin Films Revealed by Magneto-Infrared Spectroscopy. Nano Letters, 2020, 20, 4588-4593.	4.5	9
80	Hybrid Symmetry Epitaxy of the Superconducting $\text{Fe}(\text{Te},\text{Se})$ Film on a Topological Insulator. Nano Letters, 2021, 21, 6518-6524.	4.5	9
81	Absence of strong localization at low conductivity in the topological surface state of low-disorder $\text{Bi}_2\text{Se}_3$ . Physical Review B, 2019, 99, .	1.1	8
82	Structurally and chemically compatible $\text{BiInSe}_3$ substrate for topological insulator thin films. Nano Research, 2020, 13, 2541-2545.	5.8	8
83	Casimir and electrostatic forces from $\text{Bi}_2\text{Se}_3$ thin films of varying thickness. Physical Review B, 2021, 103, .		
84	Pairing symmetry in $\text{Bi}_2\text{Sr}_2\text{Ca}_1\text{Cu}_2\text{O}_{8+x}$ . Europhysics Letters, 2003, 64, 489-495.	0.7	7
85	Layer-resolved many-electron interactions in delafossite $\text{PdCoO}_2$ from standing-wave photoemission spectroscopy. Communications Physics, 2021, 4, .	2.0	7
86	Infrared Spectroscopy of the Topological Surface States of $\text{Bi}_2\text{Se}_3$ by Use of the Berreman Effect. Physical Review Letters, 2018, 121, 176803.	2.9	6
87	Probing unconventional superconducting symmetries using Josephson interferometry. Physica C: Superconductivity and Its Applications, 2002, 368, 261-266.	0.6	5
88	Observation of optical absorption correlated with surface state of topological insulator. Physical Review B, 2019, 100, .	1.1	5
89	Electronic correlation determining correlated plasmons in $\text{Sb}$ -doped $\text{Bi}_2\text{Se}_3$ thin films.	1.1	5
90	Engineering Topological Superlattices and Phase Diagrams. Nano Letters, 2019, 19, 716-721.	4.5	5

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91	Pb-doped $\text{Bi}_2\text{Se}_3$ thin films via interfacial engineering. Physical Review Materials, 2020, 4, .	0.9	5
92	Suppressing carrier density in $(\text{Bi}_{1-x}\text{Sb}_x)_2\text{Te}$ . Physics D: Applied Physics, 2021, 54, 504007.	1.3	4
93	Defect scattering in high $T_c$ and colossal magnetoresistive tunnel junctions. Physica C: Superconductivity and Its Applications, 2000, 335, 184-189.	0.6	3
94	Spatially selective and reversible doping control in cuprate films. Applied Physics Letters, 2005, 87, 231911.	1.5	3
95	Nonvolatile Solid-State Charged-Polymer Gating of Topological Insulators into the Topological Insulating Regime. Physical Review Applied, 2018, 9, .	1.5	3
96	Ambipolar magneto-optical response of ultralow carrier density topological insulators. Physical Review B, 2021, 103, .	1.1	3
97	Effective reduction of $\text{PdCoO}_2$ thin films via hydrogenation and sign tunable anomalous Hall effect. Physical Review Materials, 2021, 5, .	0.9	3
98	Spacer-Layer-Tunable Magnetism and High-Field Topological Hall Effect in Topological Insulator Heterostructures. Nano Letters, 2021, 21, 5914-5919.	4.5	3
99	Infrared plasmons in ultrahigh conductive $\text{PdCoO}_2$ metallic oxide. Communications Physics, 2022, 5, .	2.0	3
100	Infrared spectroscopy of two-dimensional electron systems. European Physical Journal: Special Topics, 2019, 228, 669-673.	1.2	2
101	Terahertz-driven hot Dirac fermion and plasmon dynamics in the bulk-insulating topological insulator $\text{Bi}_2\text{Se}_3$ . Physical Review B, 2022, 105, .	1.1	2
102	Anomalous Hall effect in electrolytically reduced $\text{PdCoO}_2$ thin films. Thin Solid Films, 2022, 751, 139197.	0.8	2
103	Time-resolved THz dynamics in thin films of $\text{Bi}_2\text{Se}_3$ . , 2014, , .		0
104	Terahertz plasmonic excitations in $\text{Bi}_2\text{Se}_3$ topological insulator. , 2014, , .		0
105	Nonlinear THz Plasmonics in $\text{Bi}_2\text{Se}_3$ Topological Insulator. , 2018, , .		0
106	Oxygen Annealing Driven Structural Evolution in $\text{PdCoO}_2$ Films Through Electron Microscopy. Microscopy and Microanalysis, 2020, 26, 612-613.	0.2	0
107	Electric Control over 2D Dirac Plasmon Resonances in Topological Insulator $\text{Bi}_2\text{Se}_3$ in Proximity Contact with Graphene. , 2019, , .		0