Eugene J Mele

List of Publications by Year
in descending order

89 papers	25,339 citations	101384 36 h-index	62479 80 g-index
89 all docs	89 docs citations	89 times ranked	15993 citing authors

#	Article	IF	Citations
1	Exchange couplingâ€“mediated broken symmetries in Ta ₂ NiSe ₅ revealed from quadrupolar circular photogalvanic effect. Science Advances, 2022, 8, eabl9020.	4.7	3
2	Boundary Modes from Periodic Magnetic and Pseudomagnetic Fields in Graphene. Physical Review Letters, 2022, 128, 176406.	2.9	10
3	Giant topological longitudinal circular photo-galvanic effect in the chiral multifold semimetal CoSi. Nature Communications, 2021, 12, 154.	5.8	89
4	Floquet Topological Phases in One-Dimensional Nonlinear Photonic Crystals. Physical Review Letters, 2021, 126, 113901.	2.9	17
5	Resolving tensions surrounding massive pulleys. American Journal of Physics, 2021, 89, 277-283.	0.3	0
6	Imaging the NÃ©el vector switching in the monolayer antiferromagnet MnPSe3 with strain-controlled Ising order. Nature Nanotechnology, 2021, 16, 782-787.	15.6	70
7	Anomalous electrodynamics and quantum geometry in the Dirac-Harper model for a graphene bilayer. Physical Review B, 2021, 104, .	1.1	2
8	Direct Imaging of Antiferromagnetic Domains and Anomalous Layer-Dependent Mirror Symmetry Breaking in Atomically Thin <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:msub><mml:mrow><mml:mi>MnPS</mml:mi></mml:mrow><mml:mrow><mml:mn>3</mml:mn></ Physical Review Letters, 2021, 127, 187201.	2.9	20
9	Broadband focusing of acoustic plasmons in graphene with an applied current. Physical Review B, 2021, 104, .	1.1	1
10	Intrinsic Fermi-surface contribution to the bulk photovoltaic effect. Physical Review Research, 2021, 3, .	1.3	23
11	Optical signatures of multifold fermions in the chiral topological semimetal CoSi. Proceedings of the National Academy of Sciences of the United States of America, 2020, 117, 27104-27110.	3.3	37
12	Obstruction and Interference in Low-Energy Models for Twisted Bilayer Graphene. Physical Review Letters, 2020, 125, 176404.	2.9	10
13	Dirac-Harper Theory for One-Dimensional MoirÃ© Superlattices. Physical Review Letters, 2020, 125, 166803.	2.9	10
14	Graphene gets bent. Physics Today, 2020, 73, 46-52.	0.3	6
15	Quadrupole topological photonic crystals. Nature Communications, 2020, 11, 3119.	5.8	92
16	Nonlinear time-domain spectroscopy near a band inversion. Physical Review B, 2020, 102, .	1.1	0
17	Spatially dispersive circular photogalvanic effect in a Weyl semimetal. Nature Materials, 2019, 18, 955-962.	13.3	99
18	Manipulating Topological Domain Boundaries in the Single-Layer Quantum Spin Hall Insulator 1Tâ€²â€“WSe2. Nano Letters, 2019, 19, 5634-5639.	4.5	30

#	Article	IF	Citations
19	Photonic crystal for graphene plasmons. Nature Communications, 2019, 10, 4780.	5.8	69
20	Floquet Chern insulators of light. Nature Communications, 2019, 10, 4194.	5.8	49
21	Twist, slip, and circular dichroism in bilayer graphene. Physical Review B, 2019, 100, .	1.1	22
22	Optically Controlled Orbitronics on a Triangular Lattice. Physical Review Letters, 2019, 123, 236403.	2.9	28
23	Dowsing for nodal lines in a topological semimetal. Proceedings of the National Academy of Sciences of the United States of America, 2019, 116, 1084-1086.	3.3	6
24	Weyl and Dirac semimetals in three-dimensional solids. Reviews of Modern Physics, 2018, 90, .	16.4	3,031
25	Dirac-Weyl Semimetal: Coexistence of Dirac and Weyl Fermions in Polar Hexagonal <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mi>A</mml:mi><mml:mi>B</mml:mi><mml:mi>C</mml:mi></mml:math> Crystals. Physical Review Letters, 2018, 121, 106404.	2.9	50
26	Theory of plasmon reflection by a 1D junction. Optics Express, 2018, 26, 17209.	1.7	19
27	Novel electronic states seen in graphene. Nature, 2018, 556, 37-38.	13.7	17
28	Plasmon Reflections by Topological Electronic Boundaries in Bilayer Graphene. Nano Letters, 2017, 17, 7080-7085.	4.5	48
29	Electrodynamics on Fermi Cyclides in Nodal Line Semimetals. Physical Review Letters, 2017, 119, 147402.	2.9	52
30	Switchable valley filter based on a graphene <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mrow><mml:mi>p</mml:mi><mml:mo>â^'</mml:mo><mml:mi>n</mml:mi></mml:mrow></mml:math> junction in a magnetic field. Physical Review B, 2017, 95, .	1.1	11
31	Optical conductivity of multi-Weyl semimetals. Physical Review B, 2017, 95, .	1.1	69
32	Semiclassical Boltzmann transport theory for multi-Weyl semimetals. Physical Review B, 2017, 95, .	1.1	41
33	Charge and spin transport on graphene grain boundaries in a quantizing magnetic field. Physical Review B, 2017, 96, .	1.1	12
34	Magnetoresistance (MR) of twisted bilayer graphene on electron transparent substrate. Synthetic Metals, 2016, 216, 65-71.	2.1	5
35	Snake states and their symmetries in graphene. Physical Review B, 2015, 92, .	1.1	36
36	Layered Topological Crystalline Insulators. Physical Review Letters, 2015, 115, 086802.	2.9	28

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37	Zero modes on zero-angle grain boundaries in graphene. Physical Review B, 2015, 91, .	1.1	9
38	Bending Rules in Graphene Kirigami. Physical Review Letters, 2015, 115, 195501.	2.9	28
39	The winding road to topological insulators. Physica Scripta, 2015, T164, 014004.	1.2	4
40	Voltage-tunable circular photogalvanic effect in silicon nanowires. Science, 2015, 349, 726-729.	6.0	73
41	Landau level splitting in rotationally faulted multilayer graphene. Physical Review B, 2014, 89, .	1.1	4
42	Magnetisation oscillations, boundary conditions and the Hofstadter butterfly in graphene flakes. Annalen Der Physik, 2014, 526, 449-460.	0.9	3
43	Stacking textures and singularities in bilayer graphene. Physical Review B, 2014, 89, .	1.1	12
44	Bulk Dirac Points in Distorted Spinels. Physical Review Letters, 2014, 112, 036403.	2.9	150
45	Spin texture on the Fermi surface of tensile-strained HgTe. Physical Review B, 2013, 87, .	1.1	48
46	Nodal surfaces in photoemission from twisted bilayer graphene. Physical Review B, 2013, 87, .	1.1	7
47	Surface State Magnetization and Chiral Edge States on Topological Insulators. Physical Review Letters, 2013, 110, 046404.	2.9	199
48	Valley Chern numbers and boundary modes in gapped bilayer graphene. Proceedings of the National Academy of Sciences of the United States of America, 2013, 110, 10546-10551.	3.3	309
49	Common path interference in Zener tunneling is a universal phenomenon. Physical Review B, 2013, 87, .	1.1	3
50	Electric charge and potential distribution in twisted multilayer graphene. Journal of Applied Physics, 2013, 113, .	1.1	0
51	Probing spin-charge relation by magnetoconductance in one-dimensional polymer nanofibers. Physical Review B, 2012, 86, .	1.1	8
52	Interlayer coupling in rotationally faulted multilayer graphenes. Journal Physics D: Applied Physics, 2012, 45, 154004.	1.3	60
53	Dirac Semimetal in Three Dimensions. Physical Review Letters, 2012, 108, 140405.	2.9	1,388
54	Theoretical investigation of the evolution of the topological phase of Bi<mml:math 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>under mechanical strain. Physical Review B, 2011, 84, .	1.1	115

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55	Low-energy coherent transport in metallic carbon nanotube junctions. Physical Review B, 2011, 83, .	1.1	16
56	Band symmetries and singularities in twisted multilayer graphene. Physical Review B, 2011, 84, .	1.1	126
57	Landau quantization in twisted bilayer graphene: The Dirac comb. Physical Review B, 2011, 84, .	1.1	20
58	Chirality dependence of theK-momentum dark excitons in carbon nanotubes. Physical Review B, 2010, 81, .	1.1	28
59	Nanoparticle shape selection by repulsive interactions: Metal islands on few-layer graphene. Physical Review B, 2010, 82, .	1.1	3
60	Commensuration and interlayer coherence in twisted bilayer graphene. Physical Review B, 2010, 81, .	1.1	384
61	Size-Selective Nanoparticle Growth on Few-Layer Graphene Films. Nano Letters, 2010, 10, 777-781.	4.5	133
62	Photoluminescence and band gap modulation in graphene oxide. Applied Physics Letters, 2009, 94, .	1.5	494
63	Comment on â€œA block slipping on a sphere with friction: Exact and perturbative solutions,â€•by Tom Prior and E. J. Mele [Am. J. Phys. 75 (5), 423â€“426 (2007)]. American Journal of Physics, 2008, 76, 92-93.	0.3	5
64	A block slipping on a sphere with friction: Exact and perturbative solutions. American Journal of Physics, 2007, 75, 423-426.	0.3	18
65	Topological Insulators in Three Dimensions. Physical Review Letters, 2007, 98, 106803.	2.9	3,769
66	One-dimensional diffusion-limited relaxation of photoexcitations in suspensions of single-walled carbon nanotubes. Physical Review B, 2006, 74, .	1.1	49
67	Quantum Spin Hall Effect in Graphene. Physical Review Letters, 2005, 95, 226801.	2.9	6,191
68	Z2Topological Order and the Quantum Spin Hall Effect. Physical Review Letters, 2005, 95, 146802.	2.9	5,045
69	Electron Interactions and Excitons in Carbon Nanotube Fluorescence Spectroscopy. AIP Conference Proceedings, 2004, , .	0.3	0
70	Theory of scanning tunneling spectroscopy of fullerene peapods. Physical Review B, 2002, 66, .	1.1	28
71	Electric Polarization of Heteropolar Nanotubes as a Geometric Phase. Physical Review Letters, 2002, 88, 056803.	2.9	269
72	Dielectric control of electrostatic barriers for molecular electronics. Applied Physics Letters, 2001, 78, 114-116.	1.5	2

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73	Optical current injection in carbon and boron nitride nanotubes. AIP Conference Proceedings, 2001, , .	0.3	0
74	Photo-galvano-mechanical phenomena in nanotubes. AIP Conference Proceedings, 2001, , .	0.3	0
75	Screening of a point charge by an anisotropic medium: Anamorphoses in the method of images. American Journal of Physics, 2001, 69, 557-562.	0.3	97
76	Electronic structure of carbon nanotube ropes. Physical Review B, 2000, 61, 11156-11165.	1.1	147
77	Photogalvanic Effects in Heteropolar Nanotubes. Physical Review Letters, 2000, 85, 1512-1515.	2.9	85
78	Theoretical examination of stress fields in Pb(Zr0.5Ti0.5)O3. Ferroelectrics, 1998, 206, 31-46.	0.3	15
79	Collective Motion and Structural Order in Adsorbate Vibrational Dynamics. Physical Review Letters, 1998, 81, 5940-5943.	2.9	13
80	Stress-induced phase transition in Pb(Zr[sub 1/2]Ti[sub 1/2])O[sub 3]. AIP Conference Proceedings, 1998, , .	0.3	7
81	Electronic structure and transport in nanotube ropes. , 1998, , .		1
82	Size, Shape, and Low Energy Electronic Structure of Carbon Nanotubes. Physical Review Letters, 1997, 78, 1932-1935.	2.9	959
83	Variational Many Body States for the U=âˆž Hubbard Model. International Journal of Modern Physics B, 1991, 05, 1791-1800.	1.0	6
84	A Model for Holon Condensation in an RVB Superconductor. , 1989, , .		0
85	Vibrational Properties of the Ï€-Bonded Chain Model of the Si(111)2Ã—1 Surface. Materials Research Society Symposia Proceedings, 1985, 63, 37.	0.1	0
86	Self-consistent effective-mass theory for intralayer screening in graphite intercalation compounds. Physical Review B, 1984, 29, 1685-1694.	1.1	611
87	Numerical integration of the time evolution operator: Excited-state dynamics in conjugated molecules. International Journal of Quantum Chemistry, 1984, 26, 347-358.	1.0	3
88	Density Functional Theory of Interplane Cohesion in Graphite and Graphite Intercalation Compounds. Materials Research Society Symposia Proceedings, 1982, 20, 123.	0.1	1
89	Vibrational Excitations of Charged Solitons in Polyacetylene. Physical Review Letters, 1980, 45, 926-929.	2.9	282