

Eugene J Mele

List of Publications by Year in descending order

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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	Quantum Spin Hall Effect in Graphene. Physical Review Letters, 2005, 95, 226801.	2.9	6,191
2	Z2Topological Order and the Quantum Spin Hall Effect. Physical Review Letters, 2005, 95, 146802.	2.9	5,045
3	Topological Insulators in Three Dimensions. Physical Review Letters, 2007, 98, 106803.	2.9	3,769
4	Weyl and Dirac semimetals in three-dimensional solids. Reviews of Modern Physics, 2018, 90, .	16.4	3,031
5	Dirac Semimetal in Three Dimensions. Physical Review Letters, 2012, 108, 140405.	2.9	1,388
6	Size, Shape, and Low Energy Electronic Structure of Carbon Nanotubes. Physical Review Letters, 1997, 78, 1932-1935.	2.9	959
7	Self-consistent effective-mass theory for intralayer screening in graphite intercalation compounds. Physical Review B, 1984, 29, 1685-1694.	1.1	611
8	Photoluminescence and band gap modulation in graphene oxide. Applied Physics Letters, 2009, 94, .	1.5	494
9	Commensuration and interlayer coherence in twisted bilayer graphene. Physical Review B, 2010, 81, .	1.1	384
10	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
11	Vibrational Excitations of Charged Solitons in Polyacetylene. Physical Review Letters, 1980, 45, 926-929.	2.9	282
12	Electric Polarization of Heteropolar Nanotubes as a Geometric Phase. Physical Review Letters, 2002, 88, 056803.	2.9	269
13	Surface State Magnetization and Chiral Edge States on Topological Insulators. Physical Review Letters, 2013, 110, 046404.	2.9	199
14	Bulk Dirac Points in Distorted Spinels. Physical Review Letters, 2014, 112, 036403.	2.9	150
15	Electronic structure of carbon nanotube ropes. Physical Review B, 2000, 61, 11156-11165.	1.1	147
16	Size-Selective Nanoparticle Growth on Few-Layer Graphene Films. Nano Letters, 2010, 10, 777-781.	4.5	133
17	Band symmetries and singularities in twisted multilayer graphene. Physical Review B, 2011, 84, .	1.1	126
18	Theoretical investigation of the evolution of the topological phase of Bi_2Se_3 under mechanical strain. Physical Review B, 2011, 84, .	1.1	115

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19	Spatially dispersive circular photogalvanic effect in a Weyl semimetal. <i>Nature Materials</i> , 2019, 18, 955-962.	13.3	99
20	Screening of a point charge by an anisotropic medium: Anamorphoses in the method of images. <i>American Journal of Physics</i> , 2001, 69, 557-562.	0.3	97
21	Quadrupole topological photonic crystals. <i>Nature Communications</i> , 2020, 11, 3119.	5.8	92
22	Giant topological longitudinal circular photo-galvanic effect in the chiral multifold semimetal CoSi. <i>Nature Communications</i> , 2021, 12, 154.	5.8	89
23	Photogalvanic Effects in Heteropolar Nanotubes. <i>Physical Review Letters</i> , 2000, 85, 1512-1515.	2.9	85
24	Voltage-tunable circular photogalvanic effect in silicon nanowires. <i>Science</i> , 2015, 349, 726-729.	6.0	73
25	Imaging the Néel vector switching in the monolayer antiferromagnet MnPSe ₃ with strain-controlled Ising order. <i>Nature Nanotechnology</i> , 2021, 16, 782-787.	15.6	70
26	Optical conductivity of multi-Weyl semimetals. <i>Physical Review B</i> , 2017, 95, .	1.1	69
27	Photonic crystal for graphene plasmons. <i>Nature Communications</i> , 2019, 10, 4780.	5.8	69
28	Interlayer coupling in rotationally faulted multilayer graphenes. <i>Journal Physics D: Applied Physics</i> , 2012, 45, 154004.	1.3	60
29	Electrodynamics on Fermi Cyclides in Nodal Line Semimetals. <i>Physical Review Letters</i> , 2017, 119, 147402.	2.9	52
30	Dirac-Weyl Semimetal: Coexistence of Dirac and Weyl Fermions in Polar Hexagonal AB_3C Crystals. <i>Physical Review Letters</i> , 2018, 121, 106404.	2.9	50
31	One-dimensional diffusion-limited relaxation of photoexcitations in suspensions of single-walled carbon nanotubes. <i>Physical Review B</i> , 2006, 74, .	1.1	49
32	Floquet Chern insulators of light. <i>Nature Communications</i> , 2019, 10, 4194.	5.8	49
33	Spin texture on the Fermi surface of tensile-strained HgTe. <i>Physical Review B</i> , 2013, 87, .	1.1	48
34	Plasmon Reflections by Topological Electronic Boundaries in Bilayer Graphene. <i>Nano Letters</i> , 2017, 17, 7080-7085.	4.5	48
35	Semiclassical Boltzmann transport theory for multi-Weyl semimetals. <i>Physical Review B</i> , 2017, 95, .	1.1	41
36	Optical signatures of multifold fermions in the chiral topological semimetal CoSi. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2020, 117, 27104-27110.	3.3	37

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37	Snake states and their symmetries in graphene. <i>Physical Review B</i> , 2015, 92, .	1.1	36
38	Manipulating Topological Domain Boundaries in the Single-Layer Quantum Spin Hall Insulator $1T\text{-}W\text{Se}_2$. <i>Nano Letters</i> , 2019, 19, 5634-5639.	4.5	30
39	Theory of scanning tunneling spectroscopy of fullerene peapods. <i>Physical Review B</i> , 2002, 66, .	1.1	28
40	Chirality dependence of the K -momentum dark excitons in carbon nanotubes. <i>Physical Review B</i> , 2010, 81, .	1.1	28
41	Layered Topological Crystalline Insulators. <i>Physical Review Letters</i> , 2015, 115, 086802.	2.9	28
42	Bending Rules in Graphene Kirigami. <i>Physical Review Letters</i> , 2015, 115, 195501.	2.9	28
43	Optically Controlled Orbitronics on a Triangular Lattice. <i>Physical Review Letters</i> , 2019, 123, 236403.	2.9	28
44	Intrinsic Fermi-surface contribution to the bulk photovoltaic effect. <i>Physical Review Research</i> , 2021, 3, .	1.3	23
45	Twist, slip, and circular dichroism in bilayer graphene. <i>Physical Review B</i> , 2019, 100, .	1.1	22
46	Landau quantization in twisted bilayer graphene: The Dirac comb. <i>Physical Review B</i> , 2011, 84, .	1.1	20
47	Direct Imaging of Antiferromagnetic Domains and Anomalous Layer-Dependent Mirror Symmetry Breaking in Atomically Thin $MnPS_3$. <i>Physical Review Letters</i> , 2021, 127, 187201.	2.9	20
48	Theory of plasmon reflection by a 1D junction. <i>Optics Express</i> , 2018, 26, 17209.	1.7	19
49	A block slipping on a sphere with friction: Exact and perturbative solutions. <i>American Journal of Physics</i> , 2007, 75, 423-426.	0.3	18
50	Novel electronic states seen in graphene. <i>Nature</i> , 2018, 556, 37-38.	13.7	17
51	Floquet Topological Phases in One-Dimensional Nonlinear Photonic Crystals. <i>Physical Review Letters</i> , 2021, 126, 113901.	2.9	17
52	Low-energy coherent transport in metallic carbon nanotube junctions. <i>Physical Review B</i> , 2011, 83, .	1.1	16
53	Theoretical examination of stress fields in $Pb(Zr_{0.5}Ti_{0.5})O_3$. <i>Ferroelectrics</i> , 1998, 206, 31-46.	0.3	15
54	Collective Motion and Structural Order in Adsorbate Vibrational Dynamics. <i>Physical Review Letters</i> , 1998, 81, 5940-5943.	2.9	13

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55	Stacking textures and singularities in bilayer graphene. <i>Physical Review B</i> , 2014, 89, .	1.1	12
56	Charge and spin transport on graphene grain boundaries in a quantizing magnetic field. <i>Physical Review B</i> , 2017, 96, .	1.1	12
57	Switchable valley filter based on a graphene π -junction in a magnetic field. <i>Physical Review B</i> , 2017, 95, .		
58	Obstruction and Interference in Low-Energy Models for Twisted Bilayer Graphene. <i>Physical Review Letters</i> , 2020, 125, 176404.	2.9	10
59	Dirac-Harper Theory for One-Dimensional Moiré Superlattices. <i>Physical Review Letters</i> , 2020, 125, 166803.	2.9	10
60	Boundary Modes from Periodic Magnetic and Pseudomagnetic Fields in Graphene. <i>Physical Review Letters</i> , 2022, 128, 176406.	2.9	10
61	Zero modes on zero-angle grain boundaries in graphene. <i>Physical Review B</i> , 2015, 91, .	1.1	9
62	Probing spin-charge relation by magnetoconductance in one-dimensional polymer nanofibers. <i>Physical Review B</i> , 2012, 86, .	1.1	8
63	Stress-induced phase transition in $\text{Pb}(\text{Zr}_{1/2}\text{Ti}_{1/2})\text{O}_3$. <i>AIP Conference Proceedings</i> , 1998, .	0.3	7
64	Nodal surfaces in photoemission from twisted bilayer graphene. <i>Physical Review B</i> , 2013, 87, .	1.1	7
65	Variational Many Body States for the $U=4$ Hubbard Model. <i>International Journal of Modern Physics B</i> , 1991, 05, 1791-1800.	1.0	6
66	Dowsing for nodal lines in a topological semimetal. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2019, 116, 1084-1086.	3.3	6
67	Graphene gets bent. <i>Physics Today</i> , 2020, 73, 46-52.	0.3	6
68	Comment on "A block slipping on a sphere with friction: Exact and perturbative solutions," by Tom Prior and E. J. Mele [<i>Am. J. Phys.</i> 75 (5), 423-426 (2007)]. <i>American Journal of Physics</i> , 2008, 76, 92-93.	0.3	5
69	Magnetoresistance (MR) of twisted bilayer graphene on electron transparent substrate. <i>Synthetic Metals</i> , 2016, 216, 65-71.	2.1	5
70	Landau level splitting in rotationally faulted multilayer graphene. <i>Physical Review B</i> , 2014, 89, .	1.1	4
71	The winding road to topological insulators. <i>Physica Scripta</i> , 2015, T164, 014004.	1.2	4
72	Numerical integration of the time evolution operator: Excited-state dynamics in conjugated molecules. <i>International Journal of Quantum Chemistry</i> , 1984, 26, 347-358.	1.0	3

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73	Nanoparticle shape selection by repulsive interactions: Metal islands on few-layer graphene. Physical Review B, 2010, 82, .	1.1	3
74	Common path interference in Zener tunneling is a universal phenomenon. Physical Review B, 2013, 87, .	1.1	3
75	Magnetisation oscillations, boundary conditions and the Hofstadter butterfly in graphene flakes. Annalen Der Physik, 2014, 526, 449-460.	0.9	3
76	Exchange coupling-mediated broken symmetries in Ta ₂ NiSe ₅ revealed from quadrupolar circular photogalvanic effect. Science Advances, 2022, 8, eabl9020.	4.7	3
77	Dielectric control of electrostatic barriers for molecular electronics. Applied Physics Letters, 2001, 78, 114-116.	1.5	2
78	Anomalous electrodynamics and quantum geometry in the Dirac-Harper model for a graphene bilayer. Physical Review B, 2021, 104, .	1.1	2
79	Density Functional Theory of Interplane Cohesion in Graphite and Graphite Intercalation Compounds. Materials Research Society Symposia Proceedings, 1982, 20, 123.	0.1	1
80	Electronic structure and transport in nanotube ropes. , 1998, , .		1
81	Broadband focusing of acoustic plasmons in graphene with an applied current. Physical Review B, 2021, 104, .	1.1	1
82	Vibrational Properties of the ĩ-Bonded Chain Model of the Si(111)2 \times 1 Surface. Materials Research Society Symposia Proceedings, 1985, 63, 37.	0.1	0
83	Optical current injection in carbon and boron nitride nanotubes. AIP Conference Proceedings, 2001, , .	0.3	0
84	Photo-galvano-mechanical phenomena in nanotubes. AIP Conference Proceedings, 2001, , .	0.3	0
85	Electron Interactions and Excitons in Carbon Nanotube Fluorescence Spectroscopy. AIP Conference Proceedings, 2004, , .	0.3	0
86	Electric charge and potential distribution in twisted multilayer graphene. Journal of Applied Physics, 2013, 113, .	1.1	0
87	Resolving tensions surrounding massive pulleys. American Journal of Physics, 2021, 89, 277-283.	0.3	0
88	Nonlinear time-domain spectroscopy near a band inversion. Physical Review B, 2020, 102, .	1.1	0
89	A Model for Holon Condensation in an RVB Superconductor. , 1989, , .		0