

# E H Hwang

## 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.

119  
papers

12,220  
citations

45  
h-index

110  
g-index

119  
ext. papers

13,307  
ext. citations

4.5  
avg, IF

6.73  
L-index

#	Paper	IF	Citations
119	Impurity-scattering-induced carrier transport in twisted bilayer graphene. <i>Physical Review Research</i> , <b>2020</b> , 2,	3.9	7
118	Linear-in-T resistivity in dilute metals: A Fermi liquid perspective. <i>Physical Review B</i> , <b>2019</b> , 99,	3.3	19
117	Plasmon-pole approximation for many-body effects in extrinsic graphene. <i>Physical Review B</i> , <b>2018</b> , 98,	3.3	4
116	Dimensionally mixed coupled collective modes. <i>Physical Review B</i> , <b>2018</b> , 98,	3.3	6
115	Diluted magnetic Dirac-Weyl materials: Susceptibility and ferromagnetism in three-dimensional chiral gapless semimetals. <i>Physical Review B</i> , <b>2018</b> , 98,	3.3	4
114	Large negative differential transconductance in multilayer graphene: the role of intersubband scattering. <i>2D Materials</i> , <b>2017</b> , 4, 025090	5.9	1
113	Ferromagnetism in chiral multilayer two-dimensional semimetals. <i>Physical Review B</i> , <b>2017</b> , 95,	3.3	9
112	Infrared spectroscopic study of carrier scattering in gated CVD graphene. <i>Physical Review B</i> , <b>2016</b> , 94,	3.3	10
111	Collective modes in multi-Weyl semimetals. <i>Scientific Reports</i> , <b>2016</b> , 6, 34023	4.9	23
110	Transport in two-dimensional modulation-doped semiconductor structures. <i>Physical Review B</i> , <b>2015</b> , 91,	3.3	20
109	Carrier screening, transport, and relaxation in three-dimensional Dirac semimetals. <i>Physical Review B</i> , <b>2015</b> , 91,	3.3	62
108	Charge transport in gapless electron-hole systems with arbitrary band dispersion. <i>Physical Review B</i> , <b>2015</b> , 91,	3.3	14
107	Stacking dependence of carrier interactions in multilayer graphene systems. <i>Physical Review B</i> , <b>2015</b> , 92,	3.3	5
106	Strongly Metallic Electron and Hole 2D Transport in an Ambipolar Si-Vacuum Field Effect Transistor. <i>Physical Review Letters</i> , <b>2015</b> , 115, 036801	7.4	5
105	Screening and transport in 2D semiconductor systems at low temperatures. <i>Scientific Reports</i> , <b>2015</b> , 5, 16655	4.9	14
104	Short-range disorder effects on electronic transport in two-dimensional semiconductor structures. <i>Physical Review B</i> , <b>2014</b> , 89,	3.3	16
103	Effective field theory, three-loop perturbative expansion, and their experimental implications in graphene many-body effects. <i>Physical Review B</i> , <b>2014</b> , 89,	3.3	45

102	Two-dimensional metal-insulator transition as a strong localization induced crossover phenomenon. <i>Physical Review B</i> , <b>2014</b> , 89,	3-3	27
101	Inelastic carrier lifetime in a coupled graphene/electron-phonon system: Role of plasmon-phonon coupling. <i>Physical Review B</i> , <b>2014</b> , 90,	3-3	9
100	Signatures of localization in the effective metallic regime of high-mobility Si MOSFETs. <i>Physical Review B</i> , <b>2014</b> , 90,	3-3	8
99	Mobility versus quality in two-dimensional semiconductor structures. <i>Physical Review B</i> , <b>2014</b> , 90,	3-3	29
98	Surface polar optical phonon interaction induced many-body effects and hot-electron relaxation in graphene. <i>Physical Review B</i> , <b>2013</b> , 87,	3-3	38
97	Thermoelectric detection of chiral heat transport in graphene in the quantum Hall regime. <i>Physical Review Letters</i> , <b>2013</b> , 110, 226801	7-4	22
96	Two-dimensional metal-insulator transition as a potential fluctuation driven semiclassical transport phenomenon. <i>Physical Review B</i> , <b>2013</b> , 88,	3-3	20
95	Velocity renormalization and anomalous quasiparticle dispersion in extrinsic graphene. <i>Physical Review B</i> , <b>2013</b> , 87,	3-3	25
94	Density-dependent electrical conductivity in suspended graphene: Approaching the Dirac point in transport. <i>Physical Review B</i> , <b>2013</b> , 87,	3-3	32
93	Valley-dependent two-dimensional transport in (100), (110), and (111) Si inversion layers at low temperatures and carrier densities. <i>Physical Review B</i> , <b>2013</b> , 87,	3-3	9
92	Universal density scaling of disorder-limited low-temperature conductivity in high-mobility two-dimensional systems. <i>Physical Review B</i> , <b>2013</b> , 88,	3-3	28
91	Electronic transport in two-dimensional Si:P doped layers. <i>Physical Review B</i> , <b>2013</b> , 87,	3-3	18
90	Disorder by order in graphene. <i>Physical Review B</i> , <b>2012</b> , 85,	3-3	35
89	Polarizability and screening in chiral multilayer graphene. <i>Physical Review B</i> , <b>2012</b> , 86,	3-3	18
88	Interplay between phonon and impurity scattering in two-dimensional hole transport. <i>Physical Review B</i> , <b>2012</b> , 86,	3-3	10
87	Gate-tunable quantum transport in double-layer graphene. <i>Physical Review B</i> , <b>2012</b> , 86,	3-3	12
86	Comparison of microscopic models for disorder in bilayer graphene: Implications for density of states and optical conductivity. <i>Physical Review B</i> , <b>2012</b> , 85,	3-3	7
85	Two-dimensional transport and screening in topological insulator surface states. <i>Physical Review B</i> , <b>2012</b> , 85,	3-3	48

84	Nonmonotonic temperature dependent transport in graphene grown by chemical vapor deposition. <i>Physical Review B</i> , <b>2011</b> , 84,	3-3	63
83	Defect in suspended bilayer graphene: The interplay of disorder and band gap. <i>Physical Review B</i> , <b>2011</b> , 84,	3-3	8
82	Disorder-induced temperature-dependent transport in graphene: Puddles, impurities, activation, and diffusion. <i>Physical Review B</i> , <b>2011</b> , 84,	3-3	74
81	Conductivity of graphene on boron nitride substrates. <i>Physical Review B</i> , <b>2011</b> , 83,	3-3	33
80	Electronic transport in two-dimensional graphene. <i>Reviews of Modern Physics</i> , <b>2011</b> , 83, 407-470	40-5	2416
79	Compressibility of graphene. <i>Physical Review B</i> , <b>2011</b> , 83,	3-3	18
78	Quasiparticles, plasmarons, and quantum spectral function in bilayer graphene. <i>Physical Review B</i> , <b>2011</b> , 84,	3-3	20
77	Optical and transport gaps in gated bilayer graphene. <i>Physical Review B</i> , <b>2011</b> , 84,	3-3	15
76	Theory of 2D transport in graphene for correlated disorder. <i>Physical Review Letters</i> , <b>2011</b> , 107, 156601	7-4	62
75	Scattering mechanisms in a high-mobility low-density carbon-doped (100) GaAs two-dimensional hole system. <i>Physical Review B</i> , <b>2011</b> , 83,	3-3	9
74	Coulomb drag in monolayer and bilayer graphene. <i>Physical Review B</i> , <b>2011</b> , 84,	3-3	55
73	Temperature-dependent compressibility in graphene and two-dimensional systems. <i>Physical Review B</i> , <b>2011</b> , 84,	3-3	12
72	Collective modes of monolayer, bilayer, and multilayer fermionic dipolar liquid. <i>Physical Review B</i> , <b>2010</b> , 82,	3-3	20
71	Spectral and optical properties of doped graphene with charged impurities in the self-consistent Born approximation. <i>Physical Review B</i> , <b>2010</b> , 82,	3-3	12
70	Dynamic screening and low-energy collective modes in bilayer graphene. <i>Physical Review B</i> , <b>2010</b> , 82,	3-3	86
69	Theory of carrier transport in bilayer graphene. <i>Physical Review B</i> , <b>2010</b> , 81,	3-3	113
68	Two-dimensional surface charge transport in topological insulators. <i>Physical Review B</i> , <b>2010</b> , 82,	3-3	136
67	Insulating behavior in metallic bilayer graphene: Interplay between density inhomogeneity and temperature. <i>Physical Review B</i> , <b>2010</b> , 82,	3-3	38

66	Plasmon-phonon coupling in graphene. <i>Physical Review B</i> , <b>2010</b> , 82,	3.3	118
65	Valley-dependent many-body effects in two-dimensional semiconductors. <i>Physical Review B</i> , <b>2009</b> , 80,	3.3	16
64	Observation of percolation-induced two-dimensional metal-insulator transition in a Si MOSFET. <i>Physical Review B</i> , <b>2009</b> , 79,	3.3	60
63	Graphene magnetoresistance in a parallel magnetic field: Spin polarization effect. <i>Physical Review B</i> , <b>2009</b> , 80,	3.3	28
62	Plasmon modes of spatially separated double-layer graphene. <i>Physical Review B</i> , <b>2009</b> , 80,	3.3	157
61	Theory of thermopower in two-dimensional graphene. <i>Physical Review B</i> , <b>2009</b> , 80,	3.3	137
60	Screening-induced temperature-dependent transport in two-dimensional graphene. <i>Physical Review B</i> , <b>2009</b> , 79,	3.3	187
59	Collective modes of the massless dirac plasma. <i>Physical Review Letters</i> , <b>2009</b> , 102, 206412	7.4	160
58	Quasiparticle spectral function in doped graphene: Electron-electron interaction effects in ARPES. <i>Physical Review B</i> , <b>2008</b> , 77,	3.3	102
57	Acoustic phonon scattering limited carrier mobility in two-dimensional extrinsic graphene. <i>Physical Review B</i> , <b>2008</b> , 77,	3.3	570
56	Density of states of disordered graphene. <i>Physical Review B</i> , <b>2008</b> , 78,	3.3	50
55	Single-particle relaxation time versus transport scattering time in a two-dimensional graphene layer. <i>Physical Review B</i> , <b>2008</b> , 77,	3.3	152
54	Ballistic hot electron transport in graphene. <i>Applied Physics Letters</i> , <b>2008</b> , 93, 023128	3.4	90
53	Limit to two-dimensional mobility in modulation-doped GaAs quantum structures: How to achieve a mobility of 100 million. <i>Physical Review B</i> , <b>2008</b> , 77,	3.3	80
52	Transport and drag in undoped electron-hole bilayers. <i>Physical Review B</i> , <b>2008</b> , 78,	3.3	15
51	Screening, Kohn anomaly, Friedel oscillation, and RKKY interaction in bilayer graphene. <i>Physical Review Letters</i> , <b>2008</b> , 101, 156802	7.4	131
50	Inelastic carrier lifetime in graphene. <i>Physical Review B</i> , <b>2007</b> , 76,	3.3	113
49	A self-consistent theory for graphene transport. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , <b>2007</b> , 104, 18392-7	11.5	971

48	Many-body interaction effects in doped and undoped graphene: Fermi liquid versus non-Fermi liquid. <i>Physical Review B</i> , <b>2007</b> , 75,	3-3	184
47	Measurement of scattering rate and minimum conductivity in graphene. <i>Physical Review Letters</i> , <b>2007</b> , 99, 246803	7-4	803
46	Dielectric function, screening, and plasmons in two-dimensional graphene. <i>Physical Review B</i> , <b>2007</b> , 75,	3-3	1352
45	Carrier transport in two-dimensional graphene layers. <i>Physical Review Letters</i> , <b>2007</b> , 98, 186806	7-4	965
44	Transport and percolation in a low-density high-mobility two-dimensional hole system. <i>Physical Review Letters</i> , <b>2007</b> , 99, 236402	7-4	54
43	Transport properties of two-dimensional electron systems on silicon (111) surfaces. <i>Physical Review B</i> , <b>2007</b> , 75,	3-3	15
42	Density dependent exchange contribution to partial differential $\mu$ / partial differential $n$ and compressibility in graphene. <i>Physical Review Letters</i> , <b>2007</b> , 99, 226801	7-4	77
41	Transport in chemically doped graphene in the presence of adsorbed molecules. <i>Physical Review B</i> , <b>2007</b> , 76,	3-3	139
40	Hall coefficient and magnetoresistance of two-dimensional spin-polarized electron systems. <i>Physical Review B</i> , <b>2006</b> , 73,	3-3	6
39	Quasi-two-dimensional diluted magnetic semiconductor systems. <i>Physical Review Letters</i> , <b>2005</b> , 95, 037201	7-4	48
38	Screening-theory-based description of the metallic behavior in SiBiGe two-dimensional electron systems. <i>Physical Review B</i> , <b>2005</b> , 72,	3-3	8
37	In-plane magnetodrag in dilute bilayer two-dimensional systems: A Fermi-liquid theory. <i>Physical Review B</i> , <b>2005</b> , 71,	3-3	14
36	Low-density spin-polarized transport in two-dimensional semiconductor structures: Temperature-dependent magnetoresistance of Si MOSFETs in an in-plane applied magnetic field. <i>Physical Review B</i> , <b>2005</b> , 72,	3-3	21
35	Similarities and differences in two-dimensional metallicity induced by temperature and a parallel magnetic field: Effect of screening. <i>Physical Review B</i> , <b>2005</b> , 72,	3-3	16
34	Two-dimensional metal-insulator transition as a percolation transition in a high-mobility electron system. <i>Physical Review Letters</i> , <b>2005</b> , 94, 136401	7-4	94
33	Transport properties of diluted magnetic semiconductors: Dynamical mean-field theory and Boltzmann theory. <i>Physical Review B</i> , <b>2005</b> , 72,	3-3	22
32	Temperature dependent weak field Hall resistance in two-dimensional carrier systems. <i>Physical Review Letters</i> , <b>2005</b> , 95, 016401	7-4	4
31	Metallicity and its low-temperature behavior in dilute two-dimensional carrier systems. <i>Physical Review B</i> , <b>2004</b> , 69,	3-3	57

30	Comment on "interaction effects in conductivity of Si inversion layers at intermediate temperatures". <i>Physical Review Letters</i> , <b>2004</b> , 93, 269703	7.4	4
29	Enhancing T <sub>c</sub> in ferromagnetic semiconductors. <i>Physical Review B</i> , <b>2004</b> , 70,	3.3	20
28	Disordered RKKY lattice mean field theory for ferromagnetism in diluted magnetic semiconductors. <i>Physical Review Letters</i> , <b>2004</b> , 92, 117201	7.4	114
27	The Role of screening in the strongly correlated 2D systems. <i>Journal of Physics A</i> , <b>2003</b> , 36, 6227-6234		
26	Temperature-dependent magnetization in diluted magnetic semiconductors. <i>Physical Review B</i> , <b>2003</b> , 67,	3.3	259
25	Temperature dependent resistivity of spin-split subbands in GaAs two-dimensional hole systems. <i>Physical Review B</i> , <b>2003</b> , 67,	3.3	6
24	Resistivity of dilute 2D electrons in an undoped GaAs heterostructure. <i>Physical Review Letters</i> , <b>2003</b> , 90, 056806	7.4	89
23	Frictional drag in dilute bilayer 2D hole systems. <i>Physical Review Letters</i> , <b>2003</b> , 90, 086801	7.4	29
22	Low-density finite-temperature apparent insulating phase in two-dimensional semiconductor systems. <i>Physical Review B</i> , <b>2003</b> , 68,	3.3	34
21	Interaction corrections to two-dimensional hole transport in the large- $\epsilon$ limit. <i>Physical Review B</i> , <b>2003</b> , 68,	3.3	64
20	Relative importance of the electron interaction strength and disorder in the two-dimensional metallic state. <i>Physical Review B</i> , <b>2002</b> , 66,	3.3	18
19	Optical conductivity of ferromagnetic semiconductors. <i>Physical Review B</i> , <b>2002</b> , 65,	3.3	29
18	Correlation-induced phonon softening in low-density coupled bilayer systems. <i>Physical Review B</i> , <b>2001</b> , 63,	3.3	3
17	Plasmon dispersion in dilute two-dimensional electron systems: Quantum-classical and Wigner crystal-electron liquid crossover. <i>Physical Review B</i> , <b>2001</b> , 64,	3.3	40
16	Das sarma and hwang reply:. <i>Physical Review Letters</i> , <b>2000</b> , 85, 3542	7.4	
15	Calculated temperature-dependent resistance in low-density two-dimensional hole gases in GaAs heterostructures. <i>Physical Review B</i> , <b>2000</b> , 61, R7838-R7841	3.3	57
14	Das sarma and hwang reply:. <i>Physical Review Letters</i> , <b>2000</b> , 85, 680	7.4	3
13	Parallel magnetic field induced giant magnetoresistance in low density quasi-two-dimensional layers. <i>Physical Review Letters</i> , <b>2000</b> , 84, 5596-9	7.4	95

12	Charged Impurity-Scattering-Limited Low-Temperature Resistivity of Low-Density Silicon Inversion Layers. <i>Physical Review Letters</i> , <b>1999</b> , 83, 164-167	7.4	193
11	Collective charge-density excitations in two-component one-dimensional quantum plasmas: Phase-fluctuation-mode dispersion and spectral weight in semiconductor quantum-wire nanostructures. <i>Physical Review B</i> , <b>1999</b> , 59, 10730-10743	3.3	19
10	Plasmons in Coupled Bilayer Structures. <i>Physical Review Letters</i> , <b>1998</b> , 81, 4216-4219	7.4	74
9	c-Axis Optical Reflectivity of Layered Cuprate Superconductors. <i>Physical Review Letters</i> , <b>1998</b> , 80, 4753-4756	7.4	11
8	Band-gap renormalization in photoexcited semiconductor quantum-wire structures in the GW approximation. <i>Physical Review B</i> , <b>1998</b> , 58, R1738-R1741	3.3	30
7	Collective Charge Density Fluctuations in Superconducting Layered Systems with Bilayer Unit Cells. <i>International Journal of Modern Physics B</i> , <b>1998</b> , 12, 2769-2783	1.1	5
6	Dynamical response of a one-dimensional quantum-wire electron system. <i>Physical Review B</i> , <b>1996</b> , 54, 1936-1946	3.3	85
5	Plasmon-pole approximation for semiconductor quantum-wire electrons. <i>Physical Review B</i> , <b>1996</b> , 54, 8057-8063	3.3	24
4	Quasiparticle properties of a coupled quantum-wire electron-phonon system. <i>Physical Review B</i> , <b>1996</b> , 54, 4996-5005	3.3	7
3	Collective modes and their coupling to pair-breaking excitations in layered d-wave superconductors. <i>Physical Review B</i> , <b>1995</b> , 52, R7010-R7013	3.3	6
2	Plasmon-phonon coupling in one-dimensional semiconductor quantum-wire structures. <i>Physical Review B</i> , <b>1995</b> , 52, R8668-R8671	3.3	23
1	Collective excitations of a two-component one-dimensional quantum plasma confined in semiconductor quantum wires. <i>Physical Review B</i> , <b>1994</b> , 50, 17267-17270	3.3	14