

K-J Tielrooij

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.

59
papers

5,135
citations

30
h-index

71
g-index

73
ext. papers

6,067
ext. citations

12.9
avg, IF

5.42
L-index

#	Paper	IF	Citations
59	Unraveling Heat Transport and Dissipation in Suspended MoSe from Bulk to Monolayer.. <i>Advanced Materials</i> , 2022 , e2108352	24	1
58	Electrically Tunable Nonequilibrium Optical Response of Graphene.. <i>ACS Nano</i> , 2022 ,	16.7	4
57	Electrical tunability of terahertz nonlinearity in graphene. <i>Science Advances</i> , 2021 , 7,	14.3	14
56	Hot plasmons make graphene shine. <i>Nature Materials</i> , 2021 , 20, 721-722	27	
55	Thickness-Dependent Elastic Softening of Few-Layer Free-Standing MoSe. <i>Advanced Materials</i> , 2021 , 33, e2008614	24	7
54	Decoupling the effects of defects on efficiency and stability through phosphonates in stable halide perovskite solar cells. <i>Joule</i> , 2021 , 5, 1246-1266	27.8	30
53	Hot-Carrier Cooling in High-Quality Graphene Is Intrinsically Limited by Optical Phonons. <i>ACS Nano</i> , 2021 ,	16.7	8
52	Grating-Graphene Metamaterial as a Platform for Terahertz Nonlinear Photonics. <i>ACS Nano</i> , 2021 , 15, 1145-1154	16.7	25
51	Hot carriers in graphene - fundamentals and applications. <i>Nanoscale</i> , 2021 , 13, 8376-8411	7.7	15
50	Long-lived charge separation following pump-wavelength-dependent ultrafast charge transfer in graphene/WS heterostructures. <i>Science Advances</i> , 2021 , 7,	14.3	23
49	Observation of giant and tunable thermal diffusivity of a Dirac fluid at room temperature. <i>Nature Nanotechnology</i> , 2021 , 16, 1195-1200	28.7	2
48	Fabrication and characterization of large-area suspended MoSe ₂ crystals down to the monolayer. <i>JPhys Materials</i> , 2021 , 4, 046001	4.2	3
47	Terahertz signatures of ultrafast Dirac fermion relaxation at the surface of topological insulators. <i>Npj Quantum Materials</i> , 2021 , 6,	5	3
46	Ultrafast carrier dynamics in graphene and graphene nanostructures. <i>Terahertz Science & Technology</i> , 2020 , 13, 135-148	0.3	
45	Terahertz Nonlinear Optics of Graphene: From Saturable Absorption to High-Harmonics Generation. <i>Advanced Optical Materials</i> , 2020 , 8, 1900771	8.1	48
44	Plasmonic antenna coupling to hyperbolic phonon-polaritons for sensitive and fast mid-infrared photodetection with graphene. <i>Nature Communications</i> , 2020 , 11, 4872	17.4	19
43	Fast electrical modulation of strong near-field interactions between erbium emitters and graphene. <i>Nature Communications</i> , 2020 , 11, 4094	17.4	7

42	Surface-Specific Spectroscopy of Water at a Potentiostatically Controlled Supported Graphene Monolayer. <i>Journal of Physical Chemistry C</i> , 2019 , 123, 24031-24038	3.8	18
41	Ultrathin Eu- and Er-Doped Y2O3 Films with Optimized Optical Properties for Quantum Technologies. <i>Journal of Physical Chemistry C</i> , 2019 , 123, 13354-13364	3.8	18
40	Fast and Sensitive Terahertz Detection Using an Antenna-Integrated Graphene pn Junction. <i>Nano Letters</i> , 2019 , 19, 2765-2773	11.5	82
39	Kinetic Ionic Permeation and Interfacial Doping of Supported Graphene. <i>Nano Letters</i> , 2019 , 19, 9029-9036	11.5	6
38	Out-of-plane heat transfer in van der Waals stacks through electron-hyperbolic phonon coupling. <i>Nature Nanotechnology</i> , 2018 , 13, 41-46	28.7	87
37	The ultrafast dynamics and conductivity of photoexcited graphene at different Fermi energies. <i>Science Advances</i> , 2018 , 4, eaar5313	14.3	61
36	Nano-imaging of intersubband transitions in van der Waals quantum wells. <i>Nature Nanotechnology</i> , 2018 , 13, 1035-1041	28.7	45
35	Highly sensitive, ultrafast photo-thermoelectric graphene THz detector 2018 ,		3
34	Extremely efficient terahertz high-harmonic generation in graphene by hot Dirac fermions. <i>Nature</i> , 2018 , 561, 507-511	50.4	205
33	Reversible Photochemical Control of Doping Levels in Supported Graphene. <i>Journal of Physical Chemistry C</i> , 2017 , 121, 4083-4091	3.8	22
32	Super-Planckian Electron Cooling in a van der Waals Stack. <i>Physical Review Letters</i> , 2017 , 118, 126804	7.4	26
31	Photo-thermionic effect in vertical graphene heterostructures. <i>Nature Communications</i> , 2016 , 7, 12174	17.4	130
30	Picosecond photoresponse in van der Waals heterostructures. <i>Nature Nanotechnology</i> , 2016 , 11, 42-6	28.7	392
29	Electrical control of optical emitter relaxation pathways enabled by graphene. <i>Nature Physics</i> , 2015 , 11, 281-287	16.2	85
28	Thermodynamic picture of ultrafast charge transport in graphene. <i>Nature Communications</i> , 2015 , 6, 7655	17.4	100
27	Generation of photovoltage in graphene on a femtosecond timescale through efficient carrier heating. <i>Nature Nanotechnology</i> , 2015 , 10, 437-43	28.7	159
26	Hot-carrier photocurrent effects at graphene-metal interfaces. <i>Journal of Physics Condensed Matter</i> , 2015 , 27, 164207	1.8	52
25	Inherent Resistivity of Graphene to Strong THz Fields. <i>Springer Proceedings in Physics</i> , 2015 , 623-625	0.2	

24	Terahertz Depolarization Effects in Colloidal TiO ₂ Films Reveal Particle Morphology. <i>Journal of Physical Chemistry C</i> , 2014 , 118, 1191-1197	3.8	14
23	Phonon-mediated mid-infrared photoresponse of graphene. <i>Nano Letters</i> , 2014 , 14, 6374-81	11.5	49
22	Competing ultrafast energy relaxation pathways in photoexcited graphene. <i>Nano Letters</i> , 2014 , 14, 5839-45	11.5	71
21	Probing ultrafast temperature changes of aqueous solutions with coherent terahertz pulses. <i>Optics Letters</i> , 2014 , 39, 1717-20	3	11
20	Femtosecond study of the effects of ions and hydrophobes on the dynamics of water. <i>Faraday Discussions</i> , 2013 , 160, 171-89; discussion 207-24	3.6	49
19	Photoexcitation cascade and multiple hot-carrier generation in graphene. <i>Nature Physics</i> , 2013 , 9, 248-256	16.2	403
18	Universal distance-scaling of nonradiative energy transfer to graphene. <i>Nano Letters</i> , 2013 , 13, 2030-5	11.5	172
17	Photoexcited carrier dynamics and impact-excitation cascade in graphene. <i>Physical Review B</i> , 2013 , 87,	3.3	63
16	Complex formation in aqueous trimethylamine-N-oxide (TMAO) solutions. <i>Journal of Physical Chemistry B</i> , 2012 , 116, 4783-95	3.4	111
15	Anisotropic water reorientation around ions. <i>Journal of Physical Chemistry B</i> , 2011 , 115, 12638-47	3.4	94
14	Vibrational and orientational dynamics of water in aqueous hydroxide solutions. <i>Journal of Chemical Physics</i> , 2011 , 135, 124517	3.9	21
13	Vibrational Förster transfer to hydrated protons. <i>Journal of Chemical Physics</i> , 2010 , 132, 194504	3.9	8
12	Influence of concentration and temperature on the dynamics of water in the hydrophobic hydration shell of tetramethylurea. <i>Journal of the American Chemical Society</i> , 2010 , 132, 15671-8	16.4	109
11	Cooperativity in ion hydration. <i>Science</i> , 2010 , 328, 1006-9	33.3	491
10	TeraHertz Dielectric Relaxation of Biological Water Confined in Model Membranes made of Lyotropic Phospholipids. <i>Molecular Crystals and Liquid Crystals</i> , 2009 , 500, 108-117	0.5	7
9	Effect of confinement on proton-transfer reactions in water nanopools. <i>ChemPhysChem</i> , 2009 , 10, 245-53	3.2	43
8	Assessment of carrier-multiplication efficiency in bulk PbSe and PbS. <i>Nature Physics</i> , 2009 , 5, 811-814	16.2	218
7	Reorientation of HDO in liquid H ₂ O at different temperatures: Comparison of first and second order correlation functions. <i>Chemical Physics Letters</i> , 2009 , 471, 71-74	2.5	52

6	Dielectric relaxation dynamics of water in model membranes probed by terahertz spectroscopy. <i>Biophysical Journal</i> , 2009 , 97, 2484-92	2.9	124
5	Strong temperature dependence of water reorientation in hydrophobic hydration shells. <i>Journal of Chemical Physics</i> , 2009 , 130, 214511	3.9	81
4	Structure dynamics of the proton in liquid water probed with terahertz time-domain spectroscopy. <i>Physical Review Letters</i> , 2009 , 102, 198303	7.4	84
3	Experimental signature of phonon-mediated spin relaxation in a two-electron quantum dot. <i>Physical Review Letters</i> , 2007 , 98, 126601	7.4	95
2	High fidelity measurement of singlet-triplet state in a quantum dot. <i>Physica Status Solidi (B): Basic Research</i> , 2006 , 243, 3855-3858	1.3	6
1	Driven coherent oscillations of a single electron spin in a quantum dot. <i>Nature</i> , 2006 , 442, 766-71	50.4	1059