

# Mack Kira

## 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.

74  
papers

4,495  
citations

30  
h-index

67  
g-index

104  
ext. papers

5,546  
ext. citations

10.6  
avg, IF

5.33  
L-index

#	Paper	IF	Citations
74	Scalable Synthesis of Monolayer Hexagonal Boron Nitride on Graphene with Giant Bandgap Renormalization.. <i>Advanced Materials</i> , <b>2022</b> , e2201387	24	5
73	Hyperspectral absorption of semiconductor monolayer crystals. <i>Applied Physics Letters</i> , <b>2020</b> , 116, 1811034	34	2
72	Monolayer GaN excitonic deep ultraviolet light emitting diodes. <i>Applied Physics Letters</i> , <b>2020</b> , 116, 0131014	34	17
71	Super-resolution lightwave tomography of electronic bands in quantum materials. <i>Science</i> , <b>2020</b> , 370, 1204-1207	33.3	8
70	Quantum-light shaping and quantum spectroscopy in semiconductors. <i>Semiconductors and Semimetals</i> , <b>2020</b> , 417-460	0.6	1
69	Controlling Defect Formation of Nanoscale AlN: Toward Efficient Current Conduction of Ultrawide-Bandgap Semiconductors. <i>Advanced Electronic Materials</i> , <b>2020</b> , 6, 2000337	6.4	7
68	Lightwave control of the valley pseudospin in a monolayer of tungsten diselenide. <i>EPJ Web of Conferences</i> , <b>2019</b> , 205, 05011	0.3	
67	Optical generation of high carrier densities in 2D semiconductor heterobilayers. <i>Science Advances</i> , <b>2019</b> , 5, eaax0145	14.3	40
66	Electron-hole collisions in an atomically thin semiconductor. <i>Journal of Physics: Conference Series</i> , <b>2019</b> , 1220, 012001	0.3	
65	Control of the nonlinear response of bulk GaAs induced by long-wavelength infrared pulses. <i>Optics Express</i> , <b>2019</b> , 27, 30462-30472	3.3	4
64	Lightwave valleytronics in a monolayer of tungsten diselenide. <i>Nature</i> , <b>2018</b> , 557, 76-80	50.4	95
63	Strong-Field Terahertz Excitations in Semiconductors <b>2018</b> , 33-39		1
62	Charge-transfer states and optical transitions at the pentacene-TiO <sub>2</sub> interface. <i>New Journal of Physics</i> , <b>2017</b> , 19, 033019	2.9	11
61	Symmetry-controlled time structure of high-harmonic carrier fields from a solid. <i>Nature Photonics</i> , <b>2017</b> , 11, 227-231	33.9	78
60	Ultrahigh Off-Resonant Field Effects in Semiconductors. <i>Laser and Photonics Reviews</i> , <b>2017</b> , 11, 17000498.3		33
59	Excitonic terahertz absorption in semiconductors with effective-mass anisotropies. <i>Journal of the Optical Society of America B: Optical Physics</i> , <b>2016</b> , 33, C30	1.7	5
58	Coherent cyclotron motion beyond Kohn's theorem. <i>Nature Physics</i> , <b>2016</b> , 12, 119-123	16.2	26

57	Hybrid cluster-expansion and density-functional-theory approach for optical absorption in TiO <sub>2</sub> . <i>Journal of the Optical Society of America B: Optical Physics</i> , <b>2016</b> , 33, C123	1.7	4
56	High-harmonic generation in solids <b>2016</b> ,		2
55	Lightwave-driven quasiparticle collisions on a subcycle timescale. <i>Nature</i> , <b>2016</b> , 533, 225-9	50.4	131
54	Real-time observation of interfering crystal electrons in high-harmonic generation. <i>Nature</i> , <b>2015</b> , 523, 572-5	50.4	332
53	Coherent terahertz control of vertical transport in semiconductor heterostructures. <i>Physical Review Letters</i> , <b>2015</b> , 114, 116802	7.4	6
52	Hyperbolic Bloch equations: Atom-cluster kinetics of an interacting Bose gas. <i>Annals of Physics</i> , <b>2015</b> , 356, 185-243	2.5	13
51	Coherent quantum depletion of an interacting atom condensate. <i>Nature Communications</i> , <b>2015</b> , 6, 6624	17.4	20
50	Phase-Locked Multi-THz High-Harmonic Generation by Dynamical Bloch Oscillations in Bulk Semiconductors. <i>Springer Proceedings in Physics</i> , <b>2015</b> , 721-724	0.2	
49	Quantum droplets of electrons and holes. <i>Nature</i> , <b>2014</b> , 506, 471-5	50.4	69
48	Sub-cycle control of terahertz high-harmonic generation by dynamical Bloch oscillations. <i>Nature Photonics</i> , <b>2014</b> , 8, 119-123	33.9	560
47	Excitation picture of an interacting Bose gas. <i>Annals of Physics</i> , <b>2014</b> , 351, 200-249	2.5	9
46	Quantum-memory effects in the emission of quantum-dot microcavities. <i>Physical Review Letters</i> , <b>2014</b> , 113, 093902	7.4	15
45	Magnetic control of Coulomb scattering and terahertz transitions among excitons. <i>Physical Review B</i> , <b>2014</b> , 89,	3.3	4
44	Characterizing biexciton coherences with quantum spectroscopy. <i>Physical Review B</i> , <b>2014</b> , 89,	3.3	11
43	Terahertz excitations of lambda systems in a semiconductor microcavity. <i>Physica Status Solidi C: Current Topics in Solid State Physics</i> , <b>2013</b> , 10, 1222-1225		1
42	Observation of forbidden exciton transitions mediated by Coulomb interactions in photoexcited semiconductor quantum wells. <i>Physical Review Letters</i> , <b>2013</b> , 110, 137404	7.4	18
41	Terahertz-induced effects on excitons in magnetic field. <i>Physica Status Solidi C: Current Topics in Solid State Physics</i> , <b>2013</b> , 10, 1218-1221		2
40	Analytical solutions for electronic states in three-dimensional semiconductor quantum rings. <i>Physica Status Solidi C: Current Topics in Solid State Physics</i> , <b>2013</b> , 10, 1246-1249		

39	Terahertz-induced exciton signatures in semiconductors. <i>Physica Status Solidi (B): Basic Research</i> , <b>2013</b> , 250, 1768-1772	1.3	2
38	Terahertz excitation of a coherent E-type three-level system of exciton-polariton modes in a quantum-well microcavity. <i>Physical Review Letters</i> , <b>2012</b> , 108, 267402	7.4	21
37	Sequential build-up of quantum-optical correlations. <i>Journal of the Optical Society of America B: Optical Physics</i> , <b>2012</b> , 29, A17	1.7	6
36	Indirect interband optical transitions in a semiconductor quantum ring with submicrometer dimensions. <i>Physical Review B</i> , <b>2011</b> , 84,	3.3	2
35	Quantum spectroscopy with Schrödinger-cat states. <i>Nature Physics</i> , <b>2011</b> , 7, 799-804	16.2	63
34	Microscopic theory of the extremely nonlinear terahertz response of semiconductors. <i>Physica Status Solidi (B): Basic Research</i> , <b>2011</b> , 248, 863-866	1.3	43
33	Interaction of terahertz radiation with semiconductors. <i>Physica Status Solidi C: Current Topics in Solid State Physics</i> , <b>2011</b> , 8, 1198-1203		
32	Plasma-related phonon-sideband emission in semiconductors. <i>Physica Status Solidi C: Current Topics in Solid State Physics</i> , <b>2011</b> , 8, 1129-1132		
31	Ultrafast transient gain in Ge/SiGe quantum wells. <i>Physica Status Solidi C: Current Topics in Solid State Physics</i> , <b>2011</b> , 8, 1109-1112		2
30	Semiconductor Quantum Optics <b>2011</b> ,		88
29	Extraction of many-body configurations from nonlinear absorption in semiconductor quantum wells. <i>Physical Review Letters</i> , <b>2010</b> , 104, 247401	7.4	41
28	Fano signatures in the intersubband terahertz response of optically excited semiconductor quantum wells. <i>Physical Review Letters</i> , <b>2009</b> , 102, 127403	7.4	22
27	Ultrafast nonlinear optical response of photoexcited Ge/SiGe quantum wells: Evidence for a femtosecond transient population inversion. <i>Physical Review B</i> , <b>2009</b> , 79,	3.3	54
26	Analytical analysis of single-photon correlations emitted by disordered semiconductor heterostructures. <i>Journal of Materials Science: Materials in Electronics</i> , <b>2009</b> , 20, 23-29	2.1	1
25	Phonon sidebands in semiconductor luminescence. <i>Physica Status Solidi (B): Basic Research</i> , <b>2009</b> , 246, 332-336	1.3	11
24	Quantum-optical spectroscopy. <i>Physica Status Solidi C: Current Topics in Solid State Physics</i> , <b>2009</b> , 6, 385-388		1
23	THz measurements of the optical response in a two-dimensional electron gas. <i>Physica Status Solidi C: Current Topics in Solid State Physics</i> , <b>2009</b> , 6, 453-456		3
22	Transient optical response of quantum well excitons to intense narrowband terahertz pulses. <i>Applied Physics Letters</i> , <b>2009</b> , 95, 201107	3.4	18

21	Charging Dynamics in Electrically Pumped Quantum Wells. <i>IEEE Journal of Quantum Electronics</i> , <b>2009</b> , 45, 1024-1032	2	2
20	Terahertz coherent control of optically dark paraexcitons in Cu <sub>2</sub> O. <i>Physical Review Letters</i> , <b>2008</b> , 101, 246401	7.4	75
19	Characterization of strong light-matter coupling in semiconductor quantum-dot microcavities via photon-statistics spectroscopy. <i>Physical Review Letters</i> , <b>2008</b> , 101, 097401	7.4	37
18	Cluster-expansion representation in quantum optics. <i>Physical Review A</i> , <b>2008</b> , 78,	2.6	46
17	Detection of THz radiation with semiconductor diode lasers. <i>Applied Physics Letters</i> , <b>2007</b> , 91, 101107	3.4	5
16	Quantum-optical spectroscopy of semiconductors. <i>Physical Review A</i> , <b>2006</b> , 73,	2.6	73
15	Vacuum Rabi splitting in semiconductors. <i>Nature Physics</i> , <b>2006</b> , 2, 81-90	16.2	623
14	Semiconductor excitons in new light. <i>Nature Materials</i> , <b>2006</b> , 5, 523-31	27	209
13	Many-body correlations and excitonic effects in semiconductor spectroscopy. <i>Progress in Quantum Electronics</i> , <b>2006</b> , 30, 155-296	9.1	257
12	Terahertz signatures of the exciton formation dynamics in non-resonantly excited semiconductors. <i>Solid State Communications</i> , <b>2004</b> , 129, 733-736	1.6	30
11	Excitonic photoluminescence in semiconductor quantum wells: plasma versus excitons. <i>Physical Review Letters</i> , <b>2004</b> , 92, 067402	7.4	86
10	Influence of Coulomb and phonon interaction on the exciton formation dynamics in semiconductor heterostructures. <i>Physical Review B</i> , <b>2003</b> , 67,	3.3	65
9	Exciton formation in semiconductors and the influence of a photonic environment. <i>Physical Review Letters</i> , <b>2001</b> , 87, 176401	7.4	77
8	Signatures of Quantum Correlations in a Semiconductor Microcavity. <i>Physica Status Solidi (B): Basic Research</i> , <b>2000</b> , 221, 107-110	1.3	
7	Quantum correlations in the nonperturbative regime of semiconductor microcavities. <i>Physical Review Letters</i> , <b>2000</b> , 85, 5392-5	7.4	31
6	Quantum Theory of Secondary Emission in Optically Excited Semiconductor Quantum Wells. <i>Physical Review Letters</i> , <b>1999</b> , 82, 3544-3547	7.4	63
5	Quantum Correlations and Intraband Coherences in Semiconductor Cavity QED. <i>Physical Review Letters</i> , <b>1999</b> , 83, 5338-5341	7.4	32
4	Quantum theory of spontaneous emission and coherent effects in semiconductor microstructures. <i>Progress in Quantum Electronics</i> , <b>1999</b> , 23, 189-279	9.1	180

- 3 Nonlinear optics of normal-mode-coupling semiconductor microcavities. *Reviews of Modern Physics*, **1999**, 71, 1591-1639 40.5 460
- 2 Linear and nonlinear optical properties of excitons in semiconductor quantum wells and microcavities. *Zeitschrift für Physik B-Condensed Matter*, **1997**, 104, 559-572 94
- 1 Excitonic Nonlinearities of Semiconductor Microcavities in the Nonperturbative Regime. *Physical Review Letters*, **1996**, 77, 5257-5260 7.4 142