Alexey Chernikov

List of Publications by Year
in descending order

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41 papers	9,107 citations	159585 30 h-index	276875 41 g-index
41 all docs	41 docs citations	41 times ranked	8694 citing authors

#	Article	IF	Citations
1	Electron recoil effect in electrically tunable <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mrow><mml:mi>Mo</mml:mi><mml:msub><mml:mi>Se</mml:mi><mml:mi><mml:r monolayers. Physical Review B, 2022, 105, .	3.2	14
2	Interlayer excitons in MoSe₂/2D perovskite hybrid heterostructures â€“ the interplay between charge and energy transfer. Nanoscale, 2022, 14, 8085-8095.	5.6	11
3	Nonclassical Exciton Diffusion in Monolayer <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:msub><mml:mrow><mml:mi>WSe</mml:mi></mml:mrow><mml:mrow><mml:mn>2</mml:mn> Physical Review Letters, 2021, 127, 076801.	7.8	40
4	Narrow-band high-lying excitonsÂwith negative-mass electrons in monolayer WSe2. Nature Communications, 2021, 12, 5500.	12.8	29
5	Roadmap on organicâ€“inorganic hybrid perovskite semiconductors and devices. APL Materials, 2021, 9, .	5.1	102
6	Quasi-1D exciton channels in strain-engineered 2D materials. Science Advances, 2021, 7, eabj3066.	10.3	37
7	Spectral asymmetry of phonon sideband luminescence in monolayer and bilayer <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:msub><mml:mi>WSe</mml:mi><mml:mn>2</mml:mn></mml:msub></ Physical Review Research, 2021, 3, .	3.5	8
8	Non-equilibrium diffusion of dark excitons in atomically thin semiconductors. Nanoscale, 2021, 13, 19966-19972.	5.6	6
9	Boosting quantum yields in two-dimensional semiconductors via proximal metal plates. Nature Communications, 2021, 12, 7095.	12.8	20
10	Dark exciton-exciton annihilation in monolayer <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:msub><mml:mrow><mml:mi>WSe</mml:mi></mml:mrow><mml:mrow><mml:mn>2</mml:mn></ Physical Review B, 2021, 104, .	3.2	11
11	Lightâ€“matter coupling and non-equilibrium dynamics of exchange-split trions in monolayer WS2. Journal of Chemical Physics, 2020, 153, 034706.	3.0	9
12	Fast and Anomalous Exciton Diffusion in Two-Dimensional Hybrid Perovskites. Nano Letters, 2020, 20, 6674-6681.	9.1	44
13	Temporal Evolution of Low-Temperature Phonon Sidebands in Transition Metal Dichalcogenides. ACS Photonics, 2020, 7, 2756-2764.	6.6	20
14	Exciton diffusion in monolayer semiconductors with suppressed disorder. Physical Review B, 2020, 101, .	3.2	74
15	Autoionization and Dressing of Excited Excitons by Free Carriers in Monolayer <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:msub><mml:mrow><mml:mi>WSe</mml:mi></mml:mrow><mml:mrow><mml:mn>2</mml:mn> Physical Review Letters, 2020, 125, 267401.	7.8	26
16	Dielectric disorder in two-dimensional materials. Nature Nanotechnology, 2019, 14, 832-837.	31.5	223
17	Exciton Propagation and Halo Formation in Two-Dimensional Materials. Nano Letters, 2019, 19, 7317-7323.	9.1	64
18	Intrinsic lifetime of higher excitonic states in tungsten diselenide monolayers. Nanoscale, 2019, 11, 12381-12387.	5.6	56

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19	Length- and Thickness-Dependent Optical Response of Liquid-Exfoliated Transition Metal Dichalcogenides. Chemistry of Materials, 2019, 31, 10049-10062.	6.7	57
20	Colloquium : Excitons in atomically thin transition metal dichalcogenides. Reviews of Modern Physics, 2018, 90, .	45.6	1,292
21	Dielectric Engineering of Electronic Correlations in a van der Waals Heterostructure. Nano Letters, 2018, 18, 1402-1409.	9.1	39
22	Spatial extent of the excited exciton states in <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:msub><mml:mi>WS</mml:mi><mml:mn>2</mml:mn></mml:msub></mm monolayers from diamagnetic shifts. Physical Review B, 2018, 98, .	3.2	40
23	Exciton Diffusion and Halo Effects in Monolayer Semiconductors. Physical Review Letters, 2018, 120, 207401.	7.8	193
24	Zeeman Splitting and Inverted Polarization of Biexciton Emission in Monolayer <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:msub><mml:mrow><mml:mi>WS</mml:mi></mml:mrow><mml:mrow><mml:mn>2</mml:mn></mml:mrow></m Physical Review Letters, 2018, 121, 057402.	7.8	70
25	Breakdown of the Static Approximation for Free Carrier Screening of Excitons in Monolayer Semiconductors. Physica Status Solidi (B): Basic Research, 2018, 255, 1800216.	1.5	22
26	Enhancement of Excitonâ€“Phonon Scattering from Monolayer to Bilayer WS₂. Nano Letters, 2018, 18, 6135-6143.	9.1	50
27	The Role of Electronic and Phononic Excitation in the Optical Response of Monolayer WS₂ after Ultrafast Excitation. Nano Letters, 2017, 17, 644-651.	9.1	143
28	Direct Observation of Ultrafast Exciton Formation in a Monolayer of WSe₂. Nano Letters, 2017, 17, 1455-1460.	9.1	171
29	Coulomb engineering of the bandgap and excitons in two-dimensional materials. Nature Communications, 2017, 8, 15251.	12.8	526
30	Exciton broadening in <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:msub><mml:mi>WS</mml:mi><mml:mn>2</mml:mn></mml:msub></mm /graphene heterostructures. Physical Review B, 2017, 96, .	3.2	46
31	Trion fine structure and coupled spinâ€“valley dynamics in monolayer tungsten disulfide. Nature Communications, 2016, 7, 12715.	12.8	239
32	Excitonic linewidth and coherence lifetime in monolayer transition metal dichalcogenides. Nature Communications, 2016, 7, 13279.	12.8	360
33	Electrical Tuning of Exciton Binding Energies in Monolayer<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:msub><mml:mrow><mml:mi>WS</mml:mi></mml:mrow><mml:mrow><mml:mn>2</mml:mn></mml:mrow></mml:msub><mml:mn> Physical Review Letters, 2015, 115, 126802.	7.8	323
34	Population inversion and giant bandgap renormalization in atomically thin WS2 layers. Nature Photonics, 2015, 9, 466-470.	31.4	366
35	Probing Interlayer Interactions in Transition Metal Dichalcogenide Heterostructures by Optical Spectroscopy: MoS₂/WS₂ and MoSe₂/WSe₂. Nano Letters, 2015, 15, 5033-5038.	9.1	277
36	Excitons in ultrathin organic-inorganic perovskite crystals. Physical Review B, 2015, 92, .	3.2	263

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37	Observation of Excitonic Rydberg States in Monolayer MoS₂ and WS₂ by Photoluminescence Excitation Spectroscopy. Nano Letters, 2015, 15, 2992-2997.	9.1	327
38	Measurement of the optical dielectric function of monolayer transition-metal dichalcogenides:<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:msub><mml:mi>MoS</mml:mi><mml:mn>2</mml:mn></mml:msub></mm xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mrow><mml:mi>Mo</mml:mi><mml:mi mathvariant="normal">S</mml:mi><mml:msub><mml:mi Valley Splitting and Polarization by the Zeeman Effect in Monolayer<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:msub><mml:mrow><mml:mi>MoSe</mml:mi></mml:mrow><mml:mrow><mml:mn>2</mml:mn> Physical Review Letters, 2014, 113, 266804.	3.2	1,017
39	Exciton Binding Energy and Nonhydrogenic Rydberg Series in Monolayer <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:msub><mml:mrow><mml:mi>WS</mml:mi></mml:mrow><mml:mrow><mml:mn>2</mml:mn></mml:mrow></m Physical Review Letters, 2014, 113, 076802.	7.8	1,814
40	Tailoring the Electronic Structure in Bilayer Molybdenum Disulfide via Interlayer Twist. Nano Letters, 2014, 14, 3869-3875.	9.1	278
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