Thorsten Deilmann

List of Publications by Year
in descending order

43 papers	2,544 citations	304368 22 h-index	233125 45 g-index
45 all docs	45 docs citations	45 times ranked	3306 citing authors

#	Article	IF	Citations
1	The Computational 2D Materials Database: high-throughput modeling and discovery of atomically thin crystals. 2D Materials, 2018, 5, 042002.	2.0	711
2	Recent progress of the Computational 2D Materials Database (C2DB). 2D Materials, 2021, 8, 044002.	2.0	218
3	Diversity of trion states and substrate effects in the optical properties of an MoS2 monolayer. Nature Communications, 2017, 8, 2117.	5.8	144
4	Highly Anisotropic in-Plane Excitons in Atomically Thin and Bulklike 1<i>T</i>â€²-ReSe₂. Nano Letters, 2017, 17, 3202-3207.	4.5	130
5	Reversible uniaxial strain tuning in atomically thin WSe ₂. 2D Materials, 2016, 3, 021011.	2.0	125
6	Classifying the Electronic and Optical Properties of Janus Monolayers. ACS Nano, 2019, 13, 13354-13364.	7.3	93
7	Finite-momentum exciton landscape in mono- and bilayer transition metal dichalcogenides. 2D Materials, 2019, 6, 035003.	2.0	84
8	Scanning Quantum Dot Microscopy. Physical Review Letters, 2015, 115, 026101.	2.9	80
9	Interlayer excitons in a bulk van der Waals semiconductor. Nature Communications, 2017, 8, 639.	5.8	76
10	Interlayer Excitons with Large Optical Amplitudes in Layered van der Waals Materials. Nano Letters, 2018, 18, 2984-2989.	4.5	71
11	Electrical tuning of optically active interlayer excitons in bilayer MoS2. Nature Nanotechnology, 2021, 16, 888-893.	15.6	60
12	Dark excitations in monolayer transition metal dichalcogenides. Physical Review B, 2017, 96, .	1.1	60
13	Discovering two-dimensional topological insulators from high-throughput computations. Physical Review Materials, 2019, 3, .	0.9	60
14	Interlayer Trions in the MoS₂/WS₂ van der Waals Heterostructure. Nano Letters, 2018, 18, 1460-1465.	4.5	56
15	Excited-State Trions 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>< Physical Review Letters, 2019, 123, 167401.	2.9	55
16	<i>AbÂInitio</i> Studies of Exciton <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mi>g</mml:mi></mml:math> Factors: Monolayer Transition Metal Dichalcogenides in Magnetic Fields. Physical Review Letters, 2020, 124, 226402.	2.9	51
17	A chemically driven quantum phase transition in a two-molecule Kondo system. Nature Physics, 2016, 12, 867-873.	6.5	49
18	Three-particle correlation from a Many-Body Perspective: Trions in a Carbon Nanotube. Physical Review Letters, 2016, 116, 196804.	2.9	43

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19	Electronic excitations in transition metal dichalcogenide monolayers from an <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mi>LDA</mml:mi><mml:mo>+</mml:mo><mml:mi mathvariant="italic">GdW</mml:mi></mml:math> approach. Physical Review B, 2018, 98, .	1.1	39
20	Dark trions govern the temperature-dependent optical absorption and emission of doped atomically thin semiconductors. Physical Review B, 2020, 101, .	1.1	39
21	Valley-contrasting optics of interlayer excitons in Mo- and W-based bulk transition metal dichalcogenides. Nanoscale, 2018, 10, 15571-15577.	2.8	31
22	Transfering spin into an extended<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mi>Ï€</mml:mi></mml:math>orbital of a large molecule. Physical Review B, 2015, 91, .	1.1	24
23	Huge Trionic Effects in Graphene Nanoribbons. Nano Letters, 2017, 17, 6833-6837.	4.5	22
24	Lightâ€“matter interaction in van der Waals hetero-structures. Journal of Physics Condensed Matter, 2020, 32, 333002.	0.7	22
25	Valley-Dependent Interlayer Excitons in Magnetic WSe₂/CrI₃. Nano Letters, 2021, 21, 5173-5178.	4.5	21
26	Towards fully automated GW band structure calculations: What we can learn from 60.000 self-energy evaluations. Npj Computational Materials, 2021, 7, .	3.5	20
27	Strain tuning of the Stokes shift in atomically thin semiconductors. Nanoscale, 2020, 12, 20786-20796.	2.8	17
28	Anomalous behavior of the excited state of the <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mi>A</mml:mi></mml:math> exciton in bulk <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 Physical Review B, 2018, 97, .	1.1	16
29	Unraveling the not-so-large trion binding energy in monolayer black phosphorus. 2D Materials, 2018, 5, 041007.	2.0	14
30	Adsorption and STM imaging of tetracyanoethylene on Ag(001): An<i>ab initio</i>study. Physical Review B, 2014, 89, .	1.1	12
31	Reply to comment on â€˜The Computational 2D Materials Database: high-throughput modeling and discovery of atomically thin crystalsâ€™. 2D Materials, 2019, 6, 048002.	2.0	12
32	Subsystem-Based GW/Betheâ€“Salpeter Equation. Journal of Chemical Theory and Computation, 2021, 17, 2186-2199.	2.3	12
33	Electronic and optical properties of a hexagonal boron nitride monolayer in its pristine form and with point defects from first principles. Physical Review B, 2022, 106, .	1.1	12
34	Nature of the excited states of layered systems and molecular excimers: Exciplex states and their dependence on structure. Physical Review B, 2019, 99, .	1.1	9
35	Scanning quantum dot microscopy: A quantitative method to measure local electrostatic potential near surfaces. Japanese Journal of Applied Physics, 2016, 55, 08NA04.	0.8	8
36	Important role of screening the electron-hole exchange interaction for the optical properties of molecules near metal surfaces. Physical Review B, 2019, 99, .	1.1	8

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37	Valley selectivity induced by magnetic adsorbates: Triplet oxygen on monolayer <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></m Physical Review B, 2020, 101, .	1.1	8
38	Inelastic electron tunneling spectroscopy for probing strongly correlated many-body systems by scanning tunneling microscopy. Physical Review B, 2020, 101, .	1.1	7
39	Interlayer and excited-state exciton transitions in bulk <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mrow><mml:mn>2</mml:mn><mml:mi>H</mml:mi><mml:mtext>â^'</m Physical Review B, 2020, 102, .	1.1	7
40	Uniaxial strain tuning of Raman spectra of a <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:msub><mml:mrow><mml:mi>ReS</mml:mi></mml:mrow><mml:mn>2</m monolayer. Physical Review B, 2022, 105, .	1.1	5
41	Trions in bulk LiF and at the LiF(001) surface. Physical Review B, 2018, 98, .	1.1	4
42	Covalent photofunctionalization and electronic repair of 2H-MoS₂<i>via</i> nitrogen incorporation. Physical Chemistry Chemical Physics, 2021, 23, 18517-18524.	1.3	3
43	Correction to Highly Anisotropic in-Plane Excitons in Atomically Thin and Bulklike 1Tâ€²-ReSe2. Nano Letters, 2017, 17, 7169-7169.	4.5	1