Viktor Ivady

List of Publications by Year
in descending order

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41 papers	1,860 citations	361413 20 h-index	345221 36 g-index
44 all docs	44 docs citations	44 times ranked	1962 citing authors

#	Article	IF	Citations
1	Carbon defect qubit in two-dimensional WS2. Nature Communications, 2022, 13, 1210.	12.8	12
2	Photoluminescence at the ground-state level anticrossing of the nitrogen-vacancy center in diamond: A comprehensive study. Physical Review B, 2021, 103, .	3.2	16
3	Room-temperature control and electrical readout of individual nitrogen-vacancy nuclear spins. Nature Communications, 2021, 12, 4421.	12.8	20
4	ADAQ: Automatic workflows for magneto-optical properties of point defects in semiconductors. Computer Physics Communications, 2021, 269, 108091.	7.5	8
5	DMRG on Top of Plane-Wave Kohnâ€“Sham Orbitals: A Case Study of Defected Boron Nitride. Journal of Chemical Theory and Computation, 2021, 17, 1143-1154.	5.3	16
6	Dipolar spin relaxation of divacancy qubits in silicon carbide. Npj Computational Materials, 2021, 7, .	8.7	7
7	Stoneâ€“Wales defects in hexagonal boron nitride as ultraviolet emitters. Npj Computational Materials, 2020, 6, .	8.7	24
8	Ab initio theory of the negatively charged boron vacancy qubit in hexagonal boron nitride. Npj Computational Materials, 2020, 6, .	8.7	118
9	Longitudinal spin relaxation model applied to point-defect qubit systems. Physical Review B, 2020, 101, .	3.2	17
10	Identification of divacancy and silicon vacancy qubits in 6H-SiC. Applied Physics Letters, 2019, 114, 112107.	3.3	28
11	Stabilization of point-defect spin qubits by quantum wells. Nature Communications, 2019, 10, 5607.	12.8	42
12	Electrically driven optical interferometry with spins in silicon carbide. Science Advances, 2019, 5, eaay0527.	10.3	55
13	First principles predictions of magneto-optical data for semiconductor point defect identification: the case of divacancy defects in 4Hâ€“SiC. New Journal of Physics, 2018, 20, 023035.	2.9	39
14	First principles calculation of spin-related quantities for point defect qubit research. Npj Computational Materials, 2018, 4, .	8.7	56
15	Ab initio description of highly correlated states in defects for realizing quantum bits. Npj Quantum Materials, 2018, 3, .	5.2	60
16	Hybrid-DFTâ€‰â€‰+â€‰â€‰V_w method for band structure calculation of semiconducting transition metal compounds: the case of cerium dioxide. Journal of Physics Condensed Matter, 2017, 29, 454002.	1.8	5
17	All-optical hyperpolarization of electron and nuclear spins in diamond. Physical Review B, 2017, 96, .	3.2	11
18	Identification of Si-vacancy related room-temperature qubits in <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mrow><mml:mn>4</mml:mn><mml:mi>H</mml:mi></mml:mrow></mml:r silicon carbide. Physical Review B, 2017, 96, .	3.2	74

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19	Isolated Spin Qubits in SiC with a High-Fidelity Infrared Spin-to-Photon Interface. Physical Review X, 2017, 7, .	8.9	125
20	High-Fidelity Bidirectional Nuclear Qubit Initialization in SiC. Physical Review Letters, 2016, 117, 220503.	7.8	16
21	Optical Nuclear Spin Polarization of Divacancies in SiC. Materials Science Forum, 2016, 858, 287-290.	0.3	0
22	First Principles Identification of Divacancy Related Photoluminescence Lines in 4H and 6H-SiC. Materials Science Forum, 2016, 858, 322-325.	0.3	4
23	Optical properties and Zeeman spectroscopy of niobium in silicon carbide. Physical Review B, 2015, 92, .	3.2	6
24	Dirac points with giant spin-orbit splitting in the electronic structure of two-dimensional transition-metal carbides. Physical Review B, 2015, 92, .	3.2	65
25	Theoretical model of dynamic spin polarization of nuclei coupled to paramagnetic point defects in diamond and silicon carbide. Physical Review B, 2015, 92, .	3.2	59
26	Optical Polarization of Nuclear Spins in Silicon Carbide. Physical Review Letters, 2015, 114, 247603.	7.8	109
27	Spin and photophysics of carbon-antisite vacancy defect in<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mrow><mml:mn>4</mml:mn><mml:mi>H</mml:mi></mml:mrow></mml:math> carbide: A potential quantum bit. Physical Review B, 2015, 91, .	3.2	50
28	Pressure and temperature dependence of the zero-field splitting in the ground state of NV centers in diamond: A first-principles study. Physical Review B, 2014, 90, .	3.2	97
29	First Principles Investigation of Divacancy in SiC Polytypes for Solid State Qubit Application. Materials Science Forum, 2014, 778-780, 499-502.	0.3	5
30	A silicon carbide room-temperature single-photon source. Nature Materials, 2014, 13, 151-156.	27.5	439
31	Theoretical unification of hybrid-DFT and<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mtext>DFT</mml:mtext><mml:mo>â€‰</mml:mo><mml:mo>+</mml:mo> for the treatment of localized orbitals. Physical Review B, 2014, 90, .	3.2	46
32	Electrically and Mechanically Tunable Electron Spins in Silicon Carbide Color Centers. Physical Review Letters, 2014, 112, 187601.	7.8	152
33	Role of screening in the density functional applied to transition-metal defects in semiconductors. Physical Review B, 2013, 87, .	3.2	35
34	Electron paramagnetic resonance and theoretical studies of Nb in 4H- and 6H-SiC. Journal of Applied Physics, 2012, 112, .	2.5	11
35	Enhancement of electron-nuclear hyperfine interaction at lattice defects in semiconducting single-walled carbon nanotubes studied byab initiodensity functional theory calculations. Physical Review B, 2012, 86, .	3.2	0
36	Transition Metal Defects in Cubic and Hexagonal Polytypes of SiC: Site Selection, Magnetic and Optical Properties from Ab Initio Calculations. Materials Science Forum, 2012, 717-720, 205-210.	0.3	2

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37	Asymmetric Split-Vacancy Defects in SiC Polytypes: A Combined Theoretical and Electron Spin Resonance Study. Physical Review Letters, 2011, 107, 195501.	7.8	22
38	Identification of Niobium in 4H-SiC by EPR and <i>Ab Initio</i> Studies. Materials Science Forum, 0, 717-720, 217-220.	0.3	3
39	Optical Properties of the Niobium Centre in 4H, 6H, and 15R SiC. Materials Science Forum, 0, 740-742, 405-408.	0.3	1
40	Theoretical Investigation of the Single Photon Emitter Carbon Antisite-Vacancy Pair in 4H-SiC. Materials Science Forum, 0, 778-780, 495-498.	0.3	1
41	<i>Ab Initio</i> Theory of Si-Vacancy Quantum Bits in 4H and 6H-SiC. Materials Science Forum, 0, 924, 895-900.	0.3	3