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	A silicon carbide room-temperature single-photon source. Nature Materials, 2014, 13, 151-156.	27.5	439
2	Electrically and Mechanically Tunable Electron Spins in Silicon Carbide Color Centers. Physical Review Letters, 2014, 112, 187601.	7.8	152
3	Isolated Spin Qubits in SiC with a High-Fidelity Infrared Spin-to-Photon Interface. Physical Review X, 2017, 7, .	8.9	125
4	Ab initio theory of the negatively charged boron vacancy qubit in hexagonal boron nitride. Npj Computational Materials, 2020, 6, .	8.7	118
5	Optical Polarization of Nuclear Spins in Silicon Carbide. Physical Review Letters, 2015, 114, 247603.	7.8	109
6	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
7	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> silicon carbide. Physical Review B, 2017, 96, .	3.2	74
8	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
9	Ab initio description of highly correlated states in defects for realizing quantum bits. Npj Quantum Materials, 2018, 3, .	5.2	60
10	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
11	First principles calculation of spin-related quantities for point defect qubit research. Npj Computational Materials, 2018, 4, .	8.7	56
12	Electrically driven optical interferometry with spins in silicon carbide. Science Advances, 2019, 5, eaay0527.	10.3	55
13	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> carbide: A potential quantum bit. Physical Review B, 2015, 91, .	3.2	50
14	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> for the treatment of localized orbitals. Physical Review B, 2014, 90, .	3.2	46
15	Stabilization of point-defect spin qubits by quantum wells. Nature Communications, 2019, 10, 5607.	12.8	42
16	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
17	Role of screening in the density functional applied to transition-metal defects in semiconductors. Physical Review B, 2013, 87, .	3.2	35
18	Identification of divacancy and silicon vacancy qubits in 6H-SiC. Applied Physics Letters, 2019, 114, 112107.	3.3	28

#	Article	IF	Citations
19	Stoneâ€“Wales defects in hexagonal boron nitride as ultraviolet emitters. Npj Computational Materials, 2020, 6, .	8.7	24
20	Asymmetric Split-Vacancy Defects in SiC Polytypes: A Combined Theoretical and Electron Spin Resonance Study. Physical Review Letters, 2011, 107, 195501.	7.8	22
21	Room-temperature control and electrical readout of individual nitrogen-vacancy nuclear spins. Nature Communications, 2021, 12, 4421.	12.8	20
22	Longitudinal spin relaxation model applied to point-defect qubit systems. Physical Review B, 2020, 101, .	3.2	17
23	High-Fidelity Bidirectional Nuclear Qubit Initialization in SiC. Physical Review Letters, 2016, 117, 220503.	7.8	16
24	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
25	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
26	Carbon defect qubit in two-dimensional WS2. Nature Communications, 2022, 13, 1210.	12.8	12
27	Electron paramagnetic resonance and theoretical studies of Nb in 4H- and 6H-SiC. Journal of Applied Physics, 2012, 112, .	2.5	11
28	All-optical hyperpolarization of electron and nuclear spins in diamond. Physical Review B, 2017, 96, .	3.2	11
29	ADAQ: Automatic workflows for magneto-optical properties of point defects in semiconductors. Computer Physics Communications, 2021, 269, 108091.	7.5	8
30	Dipolar spin relaxation of divacancy qubits in silicon carbide. Npj Computational Materials, 2021, 7, .	8.7	7
31	Optical properties and Zeeman spectroscopy of niobium in silicon carbide. Physical Review B, 2015, 92, .	3.2	6
32	First Principles Investigation of Divacancy in SiC Polytypes for Solid State Qubit Application. Materials Science Forum, 2014, 778-780, 499-502.	0.3	5
33	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
34	First Principles Identification of Divacancy Related Photoluminescence Lines in 4H and 6H-SiC. Materials Science Forum, 2016, 858, 322-325.	0.3	4
35	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
36	<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

#	Article	IF	Citations
37	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
38	Optical Properties of the Niobium Centre in 4H, 6H, and 15R SiC. Materials Science Forum, 0, 740-742, 405-408.	0.3	1
39	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
40	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
41	Optical Nuclear Spin Polarization of Divacancies in SiC. Materials Science Forum, 2016, 858, 287-290.	0.3	0