

Kohei Itoh

List of Publications by Year in descending order

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75
papers

5,257
citations

147801

31
h-index

106344

65
g-index

75
all docs

75
docs citations

75
times ranked

3509
citing authors

#	ARTICLE	IF	CITATIONS
1	Precision tomography of a three-qubit donor quantum processor in silicon. <i>Nature</i> , 2022, 601, 348-353.	27.8	118
2	Efficient Discrete Feature Encoding for Variational Quantum Classifier. <i>IEEE Transactions on Quantum Engineering</i> , 2021, 2, 1-14.	4.9	15
3	Pauli Blockade in Silicon Quantum Dots with Spin-Orbit Control. <i>PRX Quantum</i> , 2021, 2, .	9.2	36
4	Bell-state tomography in a silicon many-electron artificial molecule. <i>Nature Communications</i> , 2021, 12, 3228.	12.8	17
5	Coherent spin qubit transport in silicon. <i>Nature Communications</i> , 2021, 12, 4114.	12.8	53
6	Conditional quantum operation of two exchange-coupled single-donor spin qubits in a MOS-compatible silicon device. <i>Nature Communications</i> , 2021, 12, 181.	12.8	34
7	A silicon quantum-dot-coupled nuclear spin qubit. <i>Nature Nanotechnology</i> , 2020, 15, 13-17.	31.5	60
8	Effect of fluorine on the suppression of boron diffusion in pre-amorphized silicon. <i>Journal of Applied Physics</i> , 2020, 128, 105701.	2.5	1
9	Coherent electrical control of a single high-spin nucleus in silicon. <i>Nature</i> , 2020, 579, 205-209.	27.8	79
10	Controllable freezing of the nuclear spin bath in a single-atom spin qubit. <i>Science Advances</i> , 2020, 6, .	10.3	19
11	Coherent spin control of s-, p-, d- and f-electrons in a silicon quantum dot. <i>Nature Communications</i> , 2020, 11, 797.	12.8	51
12	Operation of a silicon quantum processor unit cell above one kelvin. <i>Nature</i> , 2020, 580, 350-354.	27.8	214
13	Electron spin relaxation of single phosphorus donors in metal-oxide-semiconductor nanoscale devices. <i>Physical Review B</i> , 2019, 99, .	3.2	22
14	Fidelity benchmarks for two-qubit gates in silicon. <i>Nature</i> , 2019, 569, 532-536.	27.8	271
15	Silicon qubit fidelities approaching incoherent noise limits via pulse engineering. <i>Nature Electronics</i> , 2019, 2, 151-158.	26.0	135
16	Single-spin qubits in isotopically enriched silicon at low magnetic field. <i>Nature Communications</i> , 2019, 10, 5500.	12.8	48
17	A quantum-dot spin qubit with coherence limited by charge noise and fidelity higher than 99.9%. <i>Nature Nanotechnology</i> , 2018, 13, 102-106.	31.5	574
18	Optimized electrical control of a Si/SiGe spin qubit in the presence of an induced frequency shift. <i>Npj Quantum Information</i> , 2018, 4, .	6.7	31

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19	Coherent control of solid state nuclear spin nano-ensembles. Npj Quantum Information, 2018, 4, .	6.7	22
20	Effect of carbon situating at end-of-range defects on silicon self-diffusion investigated using pre-amorphized isotope multilayers. Japanese Journal of Applied Physics, 2016, 55, 036504.	1.5	1
21	Bell's inequality violation with spins in silicon. Nature Nanotechnology, 2016, 11, 242-246.	31.5	56
22	Observation of silicon self-diffusion enhanced by the strain originated from end-of-range defects using isotope multilayers. Journal of Applied Physics, 2015, 118, 115706.	2.5	6
23	Phonon Engineering in Isotopically Disordered Silicon Nanowires. Nano Letters, 2015, 15, 3885-3893.	9.1	36
24	Electrically controlling single-spin qubits in a continuous microwave field. Science Advances, 2015, 1, e1500022.	10.3	125
25	A two-qubit logic gate in silicon. Nature, 2015, 526, 410-414.	27.8	700
26	Quantifying the quantum gate fidelity of single-atom spin qubits in silicon by randomized benchmarking. Journal of Physics Condensed Matter, 2015, 27, 154205.	1.8	107
27	Isotope engineering of silicon and diamond for quantum computing and sensing applications. MRS Communications, 2014, 4, 143-157.	1.8	212
28	An addressable quantum dot qubit with fault-tolerant control-fidelity. Nature Nanotechnology, 2014, 9, 981-985.	31.5	703
29	Host isotope mass effects on the hyperfine interaction of group-V donors in silicon. Physical Review B, 2014, 90, .	3.2	8
30	Storing quantum information for 30 seconds in a nanoelectronic device. Nature Nanotechnology, 2014, 9, 986-991.	31.5	513
31	Position and density control of nitrogen-vacancy centers in diamond using micropatterned substrate for chemical vapor deposition. , 2013, , .		0
32	Optically-detected NMR of optically-hyperpolarized ^{31}P neutral donors in ^{28}Si . Journal of Applied Physics, 2011, 109, .	2.5	36
33	^{73}Ge NQR Study of Superconducting Skutterudites $\text{MPt}_4\text{Ge}_{12}$ (M= Sr, Ba). Journal of the Physical Society of Japan, 2011, 80, SA028.	1.6	0
34	Superconducting Characteristics of Filled Skutterudites $\text{LaPt}_4\text{Ge}_{12}$ and $\text{PrPt}_4\text{Ge}_{12}$: ^{73}Ge -NQR/NMR Studies. Journal of the Physical Society of Japan, 2010, 79, 063702.	1.6	24
35	Behaviors of neutral and charged silicon self-interstitials during transient enhanced diffusion in silicon investigated by isotope superlattices. Journal of Applied Physics, 2009, 105, .	2.5	9
36	Multiband Superconductivity in Heavy Fermion Compound CePt_3Si without Inversion Symmetry: An NMR Study on a High-Quality Single Crystal. Journal of the Physical Society of Japan, 2009, 78, 014705.	1.6	40

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37	Isotopes for nanoelectronic devices. <i>Nature Nanotechnology</i> , 2009, 4, 480-481.	31.5	4
38	A Schottky top-gated two-dimensional electron system in a nuclear spin free Si/SiGe heterostructure. <i>Physica Status Solidi - Rapid Research Letters</i> , 2009, 3, 61-63.	2.4	14
39	⁷³ Ge- and ^{135/137} Ba-NMR Studies of Clathrate Superconductor Ba ₂₄ Ge ₁₀₀ . <i>Journal of the Physical Society of Japan</i> , 2009, 78, 104710.	1.6	7
40	503 Micro fabrication of magnetic materials by pattern transfer of hard Films. <i>The Proceedings of Ibaraki District Conference</i> , 2009, 2009, 123-124.	0.0	0
41	Generation of excess Si species at Si-SiO ₂ interface and their diffusion into SiO ₂ during Si thermal oxidation. <i>Journal of Applied Physics</i> , 2008, 103, 026101.	2.5	8
42	Charge states of vacancies in germanium investigated by simultaneous observation of germanium self-diffusion and arsenic diffusion. <i>Applied Physics Letters</i> , 2008, 93, .	3.3	56
43	Optimized Ge nanowire arrays on Si by modified surfactant mediated epitaxy. <i>Physical Review B</i> , 2007, 75, .	3.2	23
44	Direct observation of the donor nuclear spin in a near-gap bound exciton transition: P31 in highly enriched ²⁸ Si. <i>Journal of Applied Physics</i> , 2007, 101, 081724.	2.5	34
45	Experimental Evidence of the Vacancy-Mediated Silicon Self-Diffusion in Single-Crystalline Silicon. <i>Physical Review Letters</i> , 2007, 98, 095901.	7.8	92
46	Experimental evidence for ferromagnetic spin-pairing superconductivity emerging in UGe ₂ : A ⁷³ Ge-nuclear-quadrupole-resonance study under pressure. <i>Physical Review B</i> , 2007, 75, .	3.2	28
47	Observation of two-dimensional hole gas with mobility and carrier density exceeding those of two-dimensional electron gas at room temperature in the SiGe heterostructures. <i>Applied Physics Letters</i> , 2007, 91, .	3.3	44
48	Enhancement of room-temperature hole conductivity in narrow and strained Ge quantum well by double-side modulation doping. <i>Applied Physics Letters</i> , 2007, 90, 192108.	3.3	6
49	Isotopically Engineered Silicon Nanoelectronics. , 2007, , .		0
50	Shallow Impurity Absorption Spectroscopy in Isotopically Enriched Silicon. <i>AIP Conference Proceedings</i> , 2007, , .	0.4	2
51	Evidence for Unconventional Superconducting Fluctuations in Heavy-Fermion Compound CeNi ₂ Ge ₂ . <i>Journal of the Physical Society of Japan</i> , 2006, 75, 043702.	1.6	5
52	Cooperative Phenomenon of Ferromagnetism and Unconventional Superconductivity in UGe ₂ : A ⁷³ Ge-NQR Study under Pressure. <i>Journal of the Physical Society of Japan</i> , 2005, 74, 2675-2678.	1.6	20
53	Electron Spin Coherence of Phosphorus Donors in Isotopically Purified ²⁹ Si. <i>Journal of Superconductivity and Novel Magnetism</i> , 2005, 18, 157-161.	0.5	6
54	Silicon Quantum Computer. <i>AIP Conference Proceedings</i> , 2005, , .	0.4	0

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55	Evidence for Uniform Coexistence of Ferromagnetism and Unconventional Superconductivity in UGe ₂ : A ⁷³ Ge-NQR Study under Pressure. Journal of the Physical Society of Japan, 2005, 74, 705-711.	1.6	51
56	Photoluminescence studies of implantation damage centers in Si ₃₀ . Journal of Applied Physics, 2004, 96, 1754-1756.	2.5	19
57	Fabrication of a Regular Array of Atomic Silicon Wires on Silicon. Materials Research Society Symposia Proceedings, 2004, 832, 262.	0.1	0
58	Preparation of the atomically straight step-edge Si (111) substrates as templates for nanostructure formation. Materials Research Society Symposia Proceedings, 2004, 832, 51.	0.1	1
59	Electron-spin phase relaxation of phosphorus donors in nuclear-spin-enriched silicon. Physical Review B, 2004, 70, .	3.2	89
60	Complete Scaling Analysis of the Metal-Insulator Transition in Ge:Ga: Effects of Doping-Compensation and Magnetic Field. Journal of the Physical Society of Japan, 2004, 73, 173-183.	1.6	28
61	Solid-State Silicon NMR Quantum Computer. Journal of Superconductivity and Novel Magnetism, 2003, 16, 175-178.	0.5	14
62	Normal processes of phonon-phonon scattering and the drag thermopower in germanium crystals with isotopic disorder. Journal of Experimental and Theoretical Physics, 2003, 96, 1078-1088.	0.9	10
63	Growth and characterization of ²⁸ Si/ ³⁰ Si isotope superlattices. Applied Physics Letters, 2003, 83, 2318-2320.	3.3	46
64	Isotope effect on the phonon-drag component of the thermoelectric power of germanium. Physical Review B, 2003, 68, .	3.2	20
65	Hyperfine interactions at dangling bonds in amorphous germanium. Physical Review B, 2003, 68, .	3.2	10
66	Comparison of the Effects of the Doping-Compensation and Magnetic-Field on the Metal-Insulator Transition of Ge:Ga. Journal of the Physical Society of Japan, 2003, 72, 181-182.	1.6	0
67	Far-Infrared Spectroscopy of the Coulomb Gap in Compensated Semiconductors. Journal of the Physical Society of Japan, 2003, 72, 215-216.	1.6	0
68	Observation of the random-to-correlated transition of the ionized-impurity distribution in compensated semiconductors. Physical Review B, 2002, 65, .	3.2	4
69	QUANTUM COMPUTATION IN A ONE-DIMENSIONAL CRYSTAL LATTICE WITH NUCLEAR MAGNETIC RESONANCE FORCE MICROSCOPY. , 2002, , .		2
70	Donor and acceptor concentration dependence of the electron Hall mobility and the Hall scattering factor in n-type ⁴ H and ⁶ H SiC. Journal of Applied Physics, 2001, 89, 6228-6234.	2.5	89
71	Localization length and impurity dielectric susceptibility in the critical regime of the metal-insulator transition in homogeneously doped p-type Ge. Physical Review B, 2000, 62, R2255-R2258.	3.2	10
72	Isotope effect for the thermal expansion coefficient of germanium. Journal of Experimental and Theoretical Physics, 1999, 88, 135-137.	0.9	8

#	ARTICLE	IF	CITATIONS
73	Title is missing!. Journal of Materials Science Letters, 1997, 16, 1894-1897.	0.5	5
74	Hopping Conduction and Metal-Insulator Transition in Isotopically Enriched Neutron-Transmutation-Doped ⁷⁰ Ge:Ga. Physical Review Letters, 1996, 77, 4058-4061.	7.8	108
75	Quantitative Evaluation of Silicon Displacement Induced by Arsenic Implantation Using Silicon Isotope Superlattices. Applied Physics Express, 0, 1, 021401.	2.4	18