Joonsuk Huh

List of Publications by Year
in descending order

55 papers	1,064 citations	516215 16 h-index	433756 31 g-index
55 all docs	55 docs citations	55 times ranked	1197 citing authors

#	Article	IF	Citations
1	Boson sampling for molecular vibronic spectra. Nature Photonics, 2015, 9, 615-620.	15.6	230
2	Atomistic Study of Energy Funneling in the Light-Harvesting Complex of Green Sulfur Bacteria. Journal of the American Chemical Society, 2014, 136, 2048-2057.	6.6	78
3	Vibronic Boson Sampling: Generalized Gaussian Boson Sampling for Molecular Vibronic Spectra at Finite Temperature. Scientific Reports, 2017, 7, 7462.	1.6	48
4	Quantum optical emulation of molecular vibronic spectroscopy using a trapped-ion device. Chemical Science, 2018, 9, 836-840.	3.7	42
5	Theoretical characterization of excitation energy transfer in chlorosome light-harvesting antennae from green sulfur bacteria. Photosynthesis Research, 2014, 120, 273-289.	1.6	41
6	Proposal for Microwave Boson Sampling. Physical Review Letters, 2016, 117, 140505.	2.9	40
7	Quantum Algorithm for Calculating Molecular Vibronic Spectra. Journal of Physical Chemistry Letters, 2019, 10, 3586-3591.	2.1	39
8	Approximating vibronic spectroscopy with imperfect quantum optics. Journal of Physics B: Atomic, Molecular and Optical Physics, 2018, 51, 245503.	0.6	32
9	Fast Delocalization Leads To Robust Long-Range Excitonic Transfer in a Large Quantum Chlorosome Model. Nano Letters, 2015, 15, 1722-1729.	4.5	29
10	An Atomic-Orbital-Based Lagrangian Approach for Calculating Geometric Gradients of Linear Response Properties. Journal of Chemical Theory and Computation, 2010, 6, 1028-1047.	2.3	28
11	Indirect-To-Direct Band Gap Transition of One-Dimensional V₂Se₉: Theoretical Study with Dispersion Energy Correction. ACS Omega, 2019, 4, 18392-18397.	1.6	27
12	Emulation of complex open quantum systems using superconducting qubits. Quantum Information Processing, 2017, 16, 1.	1.0	23
13	Application of time-independent cumulant expansion to calculation of Franckâ€“Condon profiles for large molecular systems. Faraday Discussions, 2011, 150, 363.	1.6	20
14	New Oneâ€Đimensional Material Nb₂Se₉: Theoretical Prediction of Indirect to Direct Band Gap Transition due to Dimensional Reduction. Physica Status Solidi - Rapid Research Letters, 2019, 13, 1800517.	1.2	20
15	Entangling bosons through particle indistinguishability and spatial overlap. Optics Express, 2020, 28, 38083.	1.7	19
16	Ternary Transition Metal Chalcogenide Nb₂Pd₃Se₈: A New Candidate of 1D Van der Waals Materials for Fieldâ€Effect Transistors. Advanced Functional Materials, 2022, 32, 2108104.	7.8	19
17	Generalized concurrence in boson sampling. Scientific Reports, 2018, 8, 6101.	1.6	18
18	One-Dimensional Single-Chain Nb₂Se₉as Efficient Electrocatalyst for Hydrogen Evolution Reaction. ACS Applied Energy Materials, 2019, 2, 5785-5792.	2.5	18

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19	Linear-algebraic bath transformation for simulating complex open quantum systems. New Journal of Physics, 2014, 16, 123008.	1.2	16
20	Entanglement of identical particles and coherence in the first quantization language. Physical Review A, 2019, 99, .	1.0	16
21	Evidence for the Coexistence of Polysulfide and Conversion Reactions in the Lithium Storage Mechanism of MoS₂ Anode Material. Chemistry of Materials, 2021, 33, 1935-1945.	3.2	16
22	Chromatic acclimation and population dynamics of green sulfur bacteria grown with spectrally tailored light. Scientific Reports, 2014, 4, 5057.	1.6	15
23	Ta₂Ni₃Se₈: 1D van der Waals Material with Ambipolar Behavior. Small, 2021, 17, e2102602.	5.2	15
24	Temperature and Carbon Assimilation Regulate the Chlorosome Biogenesis in Green Sulfur Bacteria. Biophysical Journal, 2013, 105, 1346-1356.	0.2	14
25	Highly concentrated single-chain atomic crystal LiMo₃Se₃ solution using ion-exchange chromatography. Chemical Communications, 2018, 54, 12503-12506.	2.2	14
26	Edge Defect-Free Anisotropic Two-Dimensional Sheets with Nearly Direct Band Gaps from a True One-Dimensional Van der Waals Nb₂Se₉ Material. ACS Omega, 2020, 5, 10800-10807.	1.6	14
27	Dynamic Covalent Hydrazone Supramolecular Polymers toward Multiresponsive Self-Assembled Nanowire System. Macromolecules, 2018, 51, 8278-8285.	2.2	13
28	Franckâ€“Condon profiles in photodetachment-photoelectron spectra of and based on vibrational configuration interaction wavefunctions. Molecular Physics, 2010, 108, 409-423.	0.8	11
29	Dynamical Casimir Effect for Gaussian Boson Sampling. Scientific Reports, 2018, 8, 3751.	1.6	11
30	Universal bound on sampling bosons in linear optics and its computational implications. National Science Review, 2019, 6, 719-729.	4.6	11
31	Unveiling the role of micropores in porous carbon for Liâ€“S batteries using operando SAXS. Chemical Communications, 2021, 57, 10500-10503.	2.2	10
32	Connection between BosonSampling with quantum and classical input states. Optics Express, 2020, 28, 6929.	1.7	9
33	One-dimensional van der Waals stacked p-type crystal Ta₂Pt₃Se₈ for nanoscale electronics. Nanoscale, 2021, 13, 17945-17952.	2.8	9
34	Analog Quantum Simulation of Non-Condon Effects in Molecular Spectroscopy. ACS Photonics, 2021, 8, 2007-2016.	3.2	8
35	Theoretical Study of Anisotropic Carrier Mobility for Two-Dimensional Nb₂Se₉ Material. ACS Omega, 2021, 6, 26782-26790.	1.6	8
36	BoostSweet: Learning molecular perceptual representations of sweeteners. Food Chemistry, 2022, 383, 132435.	4.2	8

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37	Structural and electronic properties of Mo6S3I6 nanowires by newly proposed theoretical compositional ordering. Scientific Reports, 2019, 9, 1222.	1.6	7
38	Multimode Bogoliubov transformation and Husimiâ€™s Q-function. Journal of Physics: Conference Series, 2020, 1612, 012015.	0.3	7
39	Quantum Emulation of Molecular Force Fields: A Blueprint for a Superconducting Architecture. Physical Review Applied, 2017, 8, .	1.5	6
40	Tuning the electronic properties of highly anisotropic 2D dangling-bond-free sheets from 1D V₂Se₉ chain structures. Nanotechnology, 2021, 32, 095203.	1.3	6
41	Structural, electronic, and transport properties of 1D Ta2Ni3Se8 semiconducting material. Applied Physics Letters, 2022, 120, .	1.5	6
42	Experimental linear optical computing of the matrix permanent. Physical Review A, 2019, 99, .	1.0	5
43	Majorization and the time complexity of linear optical networks. Journal of Physics A: Mathematical and Theoretical, 2019, 52, 245301.	0.7	5
44	Raman scattering of true 1D van der Waals Nb₂Se₉ nanowires. Journal of Raman Spectroscopy, 2020, 51, 1100-1107.	1.2	5
45	A stochastic reorganizational bath model for electronic energy transfer. Journal of Chemical Physics, 2014, 140, 244103.	1.2	4
46	Partial distinguishability as a coherence resource in boson sampling. Quantum Information Processing, 2020, 19, 1.	1.0	4
47	LiOtBu-promoted stereoselective deconjugation of Î±,Î²-unsaturated diesters probed using density functional theory. Organic Chemistry Frontiers, 2020, 7, 3427-3433.	2.3	4
48	Cumulant expansion for fast estimate of non-Condon effects in vibronic transition profiles. Scientific Reports, 2017, 7, 17561.	1.6	3
49	Carrier mobility of one-dimensional vanadium selenide (V2Se9) monolayer and nanoribbon systems: DFT study. Nanotechnology, 2022, 33, 135703.	1.3	3
50	Unconventional assemblies of bisacylhydrazones: The role of water for circularly polarized luminescence. Aggregate, 2022, 3, .	5.2	3
51	Quantum Computing for Molecular Vibronic Spectra and Gaussian Boson Sampling. Journal of Physics: Conference Series, 2018, 1071, 012009.	0.3	2
52	Unveiling two-dimensional magnesium hydride as a hydrogen storage material via a generative adversarial network. Nanoscale Advances, 2022, 4, 2332-2338.	2.2	2
53	Sampling photons to simulate molecules. Physics Magazine, 2020, 13, .	0.1	1
54	Additive-free photo-mediated oxidative cyclization of pyridinium acylhydrazones to 1,3,4-oxadiazoles: solid-state conversion in a microporous organic polymer and supramolecular energy-level engineering. RSC Advances, 2021, 11, 1969-1975.	1.7	1

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55	Midwavelength Infrared Colloidal Nanowire Laser. Journal of Physical Chemistry Letters, 2022, 13, 1431-1437.	2.1	1