

Sang-Kil Son

List of Publications by Year in descending order

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71
papers

2,790
citations

186265

28
h-index

175258

52
g-index

73
all docs

73
docs citations

73
times ranked

2291
citing authors

#	ARTICLE	IF	CITATIONS
1	X-ray multiphoton-induced Coulomb explosion images complex single molecules. <i>Nature Physics</i> , 2022, 18, 423-428.	16.7	48
2	Theoretical investigation of orbital alignment of x-ray-ionized atoms in exotic electronic configurations. <i>Physical Review A</i> , 2022, 105, .	2.5	6
3	Electron-ion coincidence measurements of molecular dynamics with intense X-ray pulses. <i>Scientific Reports</i> , 2021, 11, 505.	3.3	11
4	Suppression of thermal nanoplasma emission in clusters strongly ionized by hard x-rays. <i>Journal of Physics B: Atomic, Molecular and Optical Physics</i> , 2021, 54, 044001.	1.5	7
5	Transient ionization potential depression in nonthermal dense plasmas at high x-ray intensity. <i>Physical Review E</i> , 2021, 103, 023203.	2.1	7
6	Probing ultrafast coherent dynamics in core-excited xenon by using attosecond XUV-NIR transient absorption spectroscopy. <i>Physical Review A</i> , 2021, 103, .	2.5	2
7	Pulse Energy and Pulse Duration Effects in the Ionization and Fragmentation of Iodomethane by Ultraintense Hard X Rays. <i>Physical Review Letters</i> , 2021, 127, 093202.	7.8	6
8	Resonance-Enhanced Multiphoton Ionization in the X-Ray Regime. <i>Physical Review Letters</i> , 2021, 127, 213202.	7.8	11
9	Inner-Shell-Ionization-Induced Femtosecond Structural Dynamics of Water Molecules Imaged at an X-Ray Free-Electron Laser. <i>Physical Review X</i> , 2021, 11, .	8.9	10
10	Enormous enhancement of molecular ionization at high x-ray intensity. <i>Journal of Physics: Conference Series</i> , 2020, 1412, 152051.	0.4	0
11	Real-time observation of disintegration processes within argon clusters ionized by a hard-x-ray pulse of moderate fluence. <i>Physical Review A</i> , 2020, 101, .	2.5	7
12	Setting the photoelectron clock through molecular alignment. <i>Nature Communications</i> , 2020, 11, 2546.	12.8	26
13	Breakdown of frustrated absorption in x-ray sequential multiphoton ionization. <i>Physical Review Research</i> , 2020, 2, .	3.6	9
14	Electronic-structure calculations for nonisothermal warm dense matter. <i>Physical Review Research</i> , 2020, 2, .	3.6	8
15	<i>xcalib</i> : a focal spot calibrator for intense X-ray free-electron laser pulses based on the charge state distributions of light atoms. <i>Journal of Synchrotron Radiation</i> , 2019, 26, 1017-1030.	2.4	16
16	Theoretical evidence for the sensitivity of charge-rearrangement-enhanced x-ray ionization to molecular size. <i>Physical Review A</i> , 2019, 100, .	2.5	5
17	Ultrafast x-ray-driven phenomena in nanocrystals: development and application of powerful simulation tools. <i>EPJ Web of Conferences</i> , 2019, 205, 05022.	0.3	0
18	Molecular ionization enhancement by charge rearrangement at high X-ray intensity. <i>EPJ Web of Conferences</i> , 2019, 205, 06009.	0.3	0

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19	Femtosecond-resolved observation of the fragmentation of buckminsterfullerene following X-ray multiphoton ionization. <i>Nature Physics</i> , 2019, 15, 1279-1283.	16.7	22
20	Chemical Understanding of the Limited Site-Specificity in Molecular Inner-Shell Photofragmentation. <i>Journal of Physical Chemistry Letters</i> , 2018, 9, 1156-1163.	4.6	31
21	Relativistic and resonant effects in the ionization of heavy atoms by ultra-intense hard X-rays. <i>Nature Communications</i> , 2018, 9, 4200.	12.8	29
22	Electron and fluorescence spectra of a water molecule irradiated by an x-ray free-electron laser pulse. <i>Physical Review A</i> , 2018, 97, .	2.5	9
23	Radiation-Induced Chemical Dynamics in Ar Clusters Exposed to Strong X-Ray Pulses. <i>Physical Review Letters</i> , 2018, 120, 223201.	7.8	18
24	Ab initio calculation of electron-impact-ionization cross sections for ions in exotic electron configurations. <i>Physical Review A</i> , 2018, 98, .	2.5	3
25	Towards the theoretical limitations of X-ray nanocrystallography at high intensity: the validity of the effective-form-factor description. <i>IUCr</i> , 2018, 5, 699-705.	2.2	2
26	Compton spectra of atoms at high x-ray intensity. <i>Journal of Physics B: Atomic, Molecular and Optical Physics</i> , 2017, 50, 064003.	1.5	4
27	Femtosecond response of polyatomic molecules to ultra-intense hard X-rays. <i>Nature</i> , 2017, 546, 129-132.	27.8	139
28	Interplay between relativistic energy corrections and resonant excitations in x-ray multiphoton ionization dynamics of Xe atoms. <i>Physical Review A</i> , 2017, 95, .	2.5	19
29	Molecular-dynamics approach for studying the nonequilibrium behavior of x-ray-heated solid-density matter. <i>Physical Review E</i> , 2017, 96, 023205.	2.1	10
30	<i>XMDYN</i> and <i>XATOM</i> : versatile simulation tools for quantitative modeling of X-ray free-electron laser induced dynamics of matter. <i>Journal of Applied Crystallography</i> , 2016, 49, 1048-1056.	4.5	73
31	Calculation of x-ray scattering patterns from nanocrystals at high x-ray intensity. <i>Structural Dynamics</i> , 2016, 3, 054101.	2.3	12
32	X-ray multiphoton ionization dynamics of a water molecule irradiated by an x-ray free-electron laser pulse. <i>Physical Review A</i> , 2016, 94, .	2.5	35
33	Kinetic Boltzmann approach adapted for modeling highly ionized matter created by x-ray irradiation of a solid. <i>Physical Review E</i> , 2016, 93, 053210.	2.1	8
34	Nanoplasma Formation by High Intensity Hard X-rays. <i>Scientific Reports</i> , 2015, 5, 10977.	3.3	60
35	Electronic damage in S atoms in a native protein crystal induced by an intense X-ray free-electron laser pulse. <i>Structural Dynamics</i> , 2015, 2, 041703.	2.3	20
36	Towards phasing using high X-ray intensity. <i>IUCr</i> , 2015, 2, 627-634.	2.2	24

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37	Spatial beam profile-induced effects in x-ray scattering pattern at high intensity. Journal of Physics: Conference Series, 2015, 635, 102008.	0.4	1
38	Towards Realistic Simulations of Macromolecules Irradiated under the Conditions of Coherent Diffraction Imaging with an X-ray Free-Electron Laser. Photonics, 2015, 2, 256-269.	2.0	23
39	Efficient electronic structure calculation for molecular ionization dynamics at high x-ray intensity. Structural Dynamics, 2015, 2, 041707.	2.3	47
40	Towards RIP using free-electron laser SFX data. Journal of Synchrotron Radiation, 2015, 22, 249-255.	2.4	27
41	Incoherent x-ray scattering in single molecule imaging. New Journal of Physics, 2014, 16, 073042.	2.9	38
42	Multiphoton Multiple Ionization of Rare-Gas Atoms and Clusters by X-Ray Free-Electron Laser Pulses from SACLA. , 2014, , .		0
43	Quantum-Mechanical Calculation of Ionization-Potential Lowering in Dense Plasmas. Physical Review X, 2014, 4, .	8.9	69
44	Femtosecond X-ray-induced explosion of C60 at extreme intensity. Nature Communications, 2014, 5, 4281.	12.8	119
45	Deep Inner-Shell Multiphoton Ionization by Intense X-Ray Free-Electron Laser Pulses. Physical Review Letters, 2013, 110, 173005.	7.8	136
46	Resonance-enhanced multiple ionization of krypton at an x-ray free-electron laser. Physical Review A, 2013, 87, .	2.5	57
47	Sequential multiphoton multiple ionization of atomic argon and xenon irradiated by x-ray free-electron laser pulses from SACLA. Journal of Physics B: Atomic, Molecular and Optical Physics, 2013, 46, 164024.	1.5	50
48	Determination of multiwavelength anomalous diffraction coefficients at high x-ray intensity. Journal of Physics B: Atomic, Molecular and Optical Physics, 2013, 46, 164015.	1.5	24
49	Recombination-amplitude calculations of noble gases, in both length and acceleration forms, beyond the strong-field approximation. Physical Review A, 2013, 88, .	2.5	10
50	Photoelectron spectroscopy method to reveal ionization potential lowering in nanoplasmas. Journal of Physics B: Atomic, Molecular and Optical Physics, 2013, 46, 164009.	1.5	7
51	Breakdown of the X-Ray Resonant Magnetic Scattering Signal during Intense Pulses of Extreme Ultraviolet Free-Electron-Laser Radiation. Physical Review Letters, 2013, 110, 234801.	7.8	37
52	Effect of screening by external charges on the atomic orbitals and photoinduced processes within the Hartree-Fock-Slater atom. Physical Review A, 2012, 86, .	2.5	20
53	Evidence for interatomic Coulombic decay in Xe K -shell-vacancy decay of XeF ₂ . Physical Review A, 2012, 86, .	2.5	13
54	Recombination Amplitude Calculation for Noble Gases beyond Strong Field Approximation in Length and Acceleration Gauge. , 2012, , .		0

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55	Enhanced nonlinear response of Ne $\langle \text{mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"} \rangle \langle \text{mml:msup} \rangle \langle \text{mml:mrow} \rangle \langle \text{mml:mn} \rangle 8 \langle \text{mml:mn} \rangle \langle \text{mml:mo} \rangle + \langle \text{mml:mo} \rangle \langle \text{mml:mrow} \rangle \langle \text{mml:msup} \rangle \langle \text{mml:math} \rangle$ to intense ultrafast x rays. <i>Physical Review A</i> , 2012, 85, .	2.5	47
56	Ultra-efficient ionization of heavy atoms by intense X-ray free-electron laser pulses. <i>Nature Photonics</i> , 2012, 6, 858-865.	31.4	218
57	Monte Carlo calculation of ion, electron, and photon spectra of xenon atoms in x-ray free-electron laser pulses. <i>Physical Review A</i> , 2012, 85, .	2.5	65
58	Nonlinear Atomic Response to Intense Ultrashort X Rays. <i>Physical Review Letters</i> , 2011, 106, 083002.	7.8	221
59	Voronoi-cell finite difference method for accurate electronic structure calculation of polyatomic molecules on unstructured grids. <i>Journal of Computational Physics</i> , 2011, 230, 2160-2173.	3.8	4
60	Impact of hollow-atom formation on coherent x-ray scattering at high intensity. <i>Physical Review A</i> , 2011, 83, .	2.5	168
61	Multiwavelength Anomalous Diffraction at High X-Ray Intensity. <i>Physical Review Letters</i> , 2011, 107, 218102.	7.8	107
62	Probing the origin of elliptical high-order harmonic generation from aligned molecules in linearly polarized laser fields. <i>Physical Review A</i> , 2010, 82, .	2.5	42
63	Multielectron effects on the orientation dependence and photoelectron angular distribution of multiphoton ionization of $\langle \text{mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"} \rangle \langle \text{mml:mrow} \rangle \langle \text{mml:msub} \rangle \langle \text{mml:mrow} \rangle \langle \text{mml:mtext} \rangle \text{CO} \langle \text{mml:mtext} \rangle \langle \text{mml:mrow} \rangle \langle \text{mml:mn} \rangle 2 \langle \text{mml:mn} \rangle \langle \text{mml:mn} \rangle 6 \langle \text{mml:mn} \rangle \langle \text{mml:math} \rangle$ strong laser fields. <i>Physical Review A</i> , 2009, 80, .	2.5	67
64	Theoretical study of orientation-dependent multiphoton ionization of polyatomic molecules in intense ultrashort laser fields: A new time-dependent Voronoi-cell finite difference method. <i>Chemical Physics</i> , 2009, 366, 91-102.	1.9	35
65	Floquet formulation for the investigation of multiphoton quantum interference in a superconducting qubit driven by a strong ac field. <i>Physical Review A</i> , 2009, 79, .	2.5	73
66	<i>Ab initio</i> theoretical investigation of the frequency comb structure and coherence in the vuv-xuv regimes via high-order harmonic generation. <i>Physical Review A</i> , 2008, 77, .	2.5	16
67	Many-mode Floquet theoretical approach for coherent control of multiphoton dynamics driven by intense frequency-comb laser fields. <i>Physical Review A</i> , 2008, 77, .	2.5	16
68	Unusual Ferromagnetic Couplings in Single End-to-End Azide-Bridged Cobalt(II) and Nickel(II) Chain Systems. <i>Chemistry - A European Journal</i> , 2001, 7, 4243-4252.	3.3	127
69	Spin-orbit effects on the transactinide-block element monohydrides MH (M=element 113-118). <i>Journal of Chemical Physics</i> , 2000, 112, 2684-2691.	3.0	85
70	High-Dimensional Manganese(II) Compounds with Noncovalent and/or Covalent Bonds Derived from Flexible Ligands: Self-Assembly and Structural Transformation. <i>Inorganic Chemistry</i> , 1999, 38, 5602-5610.	4.0	91
71	Structures and Stabilities for Halides and Oxides of Transactinide Elements Rf, Db, and Sg Calculated by Relativistic Effective Core Potential Methods. <i>Journal of Physical Chemistry A</i> , 1999, 103, 9109-9115.	2.5	27