Keijo J Hamalainen

List of Publications by Year
in descending order

110	3,888	117571	149623
papers	citations	34 h-index	56 g-index

110	110	110	3415
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Dynamic multi-source X-ray tomography using a spacetime level set method. Journal of Computational Physics, 2015, 291, 218-237.	1.9	17
2	Inelastic x-ray scattering in heterostructures: electronic excitations in LaAlO₃/SrTiO₃. Journal of Physics Condensed Matter, 2015, 27, 335501.	0.7	8
3	Bench-top X-ray microtomography complemented with spatially localized X-ray scattering experiments. Journal of Applied Crystallography, 2014, 47, 471-475.	1.9	7
4	Interplay between Temperature-Activated Vibrations and Nondipolar Effects in the Valence Excitations of the CO₂ Molecule. Journal of Physical Chemistry A, 2014, 118, 3288-3294.	1.1	10
5	Molecular-Level Changes of Aqueous Poly(N-isopropylacrylamide) in Phase Transition. Journal of Physical Chemistry B, 2014, 118, 5518-5523.	1.2	15
6	Effect of the Hydrophobic Alcohol Chain Length on the Hydrogen-Bond Network of Water. Journal of Physical Chemistry B, 2014, 118, 8750-8755.	1.2	38
7	The origin and loss of periodic patterning in the turtle shell. Development (Cambridge), 2014, 141, 3033-3039.	1.2	71
8	Intra- and intermolecular effects on the Compton profile of the ionic liquid 1,3-dimethylimidazolium chloride. Journal of Chemical Physics, 2014, 141, 244505.	1.2	2
9	Temperature dependence of CO2 and N2 core-electron excitation spectra at high pressure. Physical Chemistry Chemical Physics, 2013, 15, 9231.	1.3	18
10	Sparse Tomography. SIAM Journal of Scientific Computing, 2013, 35, B644-B665.	1.3	44
11	Microscopic structure of water at elevated pressures and temperatures. Proceedings of the National Academy of Sciences of the United States of America, 2013, 110, 6301-6306.	3.3	127
12	Contraction of completeness-optimized basis sets: Application to ground-state electron momentum densities. Journal of Chemical Physics, 2013, 138, 044109.	1.2	18
13	Saturation Behavior in X-ray Raman Scattering Spectra of Aqueous LiCl. Journal of Physical Chemistry B, 2013, 117, 16506-16511.	1.2	46
14	Momentum distribution and Compton profile by theab initioGW approximation. Physical Review B, 2012, 86, .	1.1	19
15	On the difficulty of increasing dental complexity. Nature, 2012, 483, 324-327.	13.7	125
16	Completeness-optimized basis sets: Application to ground-state electron momentum densities. Journal of Chemical Physics, 2012, 137, 104105.	1.2	19
17	X-ray-Raman-scattering-based EXAFS beyond the dipole limit. Journal of Synchrotron Radiation, 2012, 19, 106-113.	1.0	25
18	ERKALEâ€”A flexible program package for Xâ€ray properties of atoms and molecules. Journal of Computational Chemistry, 2012, 33, 1572-1585.	1.5	70

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19	Tablet preformulations of indomethacin-loaded mesoporous silicon microparticles. International Journal of Pharmaceutics, 2012, 422, 125-131.	2.6	31
20	Calculation of isotropic Compton profiles with Gaussian basis sets. Physical Chemistry Chemical Physics, 2011, 13, 5630.	1.3	16
21	Inelastic X-ray scattering and vibrational effects at the K-edges of gaseous N2, N2O, and CO2. Physical Chemistry Chemical Physics, 2011, 13, 11678.	1.3	25
22	Temperature-Induced Structural Changes of Tetrahydrofuran Clathrate and of the Liquid Water/Tetrahydrofuran Mixture. Journal of Physical Chemistry C, 2011, 115, 21009-21015.	1.5	12
23	Ichnological trends along an open-water transect across a large marginal-marine epicontinental basin, the modern Baltic Sea. Sedimentary Geology, 2011, 241, 40-51.	1.0	30
24	Experimental and computational study of crystalline formic acid composed of the higher-energy conformer. Journal of Chemical Physics, 2011, 134, 054506.	1.2	10
25	Reexamining the Lyman-Birge-Hopfield band of N<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:msub><mml:mrow /><mml:mn>2</mml:mn></mml:msub></mml:math>. Physical Review A, 2011, 84, .	1.0	19
26	Temperature Dependence of the Near-Edge Spectrum of Water. Journal of Physical Chemistry B, 2011, 115, 14544-14550.	1.2	49
27	Direct tomography with chemical-bond contrast. Nature Materials, 2011, 10, 489-493.	13.3	88
28	Anisotropic excitonic effects in the energy loss function of hexagonal boron nitride. Physical Review B, 2011, 83, .	1.1	34
29	Measurement of Two Solvation Regimes in Water-Ethanol Mixtures Using X-Ray Compton Scattering. Physical Review Letters, 2011, 107, 197401.	2.9	50
30	Momentum Distribution and Renormalization Factor in Sodium and the Electron Gas. Physical Review Letters, 2010, 105, 086403.	2.9	65
31	Time-dependent density functional approach for the calculation of inelastic x-ray scattering spectra of molecules. Journal of Chemical Physics, 2010, 133, 174111.	1.2	23
32	Anomalous Energetics in Tetrahydrofuran Clathrate Hydrate Revealed by X-ray Compton Scattering. Journal of Physical Chemistry Letters, 2010, 1, 2832-2836.	2.1	16
33	Universal Signature of Hydrogen Bonding in the Oxygen K-Edge Spectrum of Alcohols. Journal of Physical Chemistry B, 2010, 114, 13076-13083.	1.2	24
34	Suboxide interface in disproportionating<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mi>a</mml:mi></mml:math>-SiO studied by x-ray Raman scattering. Physical Review B, 2010, 81, .	1.1	13
35	Structure of Liquid Linear Alcohols. Journal of Physical Chemistry B, 2010, 114, 6426-6436.	1.2	82
36	Phase separation and Si nanocrystal formation in bulk SiO studied by x-ray scattering. Applied Physics Letters, 2010, 96, .	1.5	30

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37	Role of Non-Hydrogen-Bonded Molecules in the Oxygen K-Edge Spectrum of Ice. Journal of Physical Chemistry B, 2010, 114, 3804-3808.	1.2	68
38	Tetrahydrofuran Clathrate Hydrate Formation. Physical Review Letters, 2009, 103, 218301.	2.9	50
39	Phase separation and nanocrystal formation in GeO. Applied Physics Letters, 2009, 95, 021910.	1.5	20
40	<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:msup><mml:mi>K</mml:mi><mml:mi>h</mml:mi></mml:msup><mml:msub><mml:mi>Î±</mml:mi> of<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:mn>3</mml:mn><mml:mi>d</mml:mi></mml:mrow></mml:math>transition metals and their photoexcitation energy dependence. Physical Review A, 2009, 79, .	1.0	22
41	K-shell diagram and hypersatellite spectra of4dtransition elements. Physical Review A, 2009, 79, .	1.0	6
42	Charge localization in alcohol isomers studied by Compton scattering. Journal of Chemical Physics, 2009, 130, 034506.	1.2	17
43	The elemental composition, the microfibril angle distribution and the shape of the cell cross-section in Norway spruce xylem. Trees - Structure and Function, 2008, 22, 499-510.	0.9	15
44	Intrashell Electron-Interaction-Mediated Photoformation of Hollow Atoms near Threshold. Physical Review Letters, 2008, 101, 043001.	2.9	21
45	Electron-hole counts in Al-substituted<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:msub><mml:mrow><mml:mtext>MgB</mml:mtext></mml:mrow><mml:mn>2</mml:mn> from x-ray Raman scattering. Physical Review B, 2008, 78, .	0.9	14
46	Isotope quantum effects in the electron momentum density of water. Journal of Chemical Physics, 2007, 126, 154508.	1.2	25
47	Configurational Energetics in Ice<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mi mathvariant="normal">I</mml:mi><mml:mi>h</mml:mi></mml:math>Probed by Compton Scattering. Physical Review Letters, 2007, 99, 197401.	2.9	25
48	Near-edge structure of nonresonant inelastic x-ray scattering fromL-shell core levels studied by a real-space multiple-scattering approach. Physical Review B, 2007, 75, .	1.1	23
49	Symmetry of the<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:mn>1</mml:mn><mml:mi>s</mml:mi></mml:mrow></mml:math>core exciton in diamond studied using x-ray Raman scattering. Physical Review B, 2007, 76, .	1.1	8
50	Density functional study of x-ray Raman scattering from aromatic hydrocarbons and polyfluorene. Physical Review B, 2007, 76, .	1.1	21
51	Recent Developments in the Analysis of X-Ray Raman Scattering. AIP Conference Proceedings, 2007, , .	0.3	0
52	Pressure induced magnetic transition in siderite FeCO3studied by x-ray emission spectroscopy. Journal of Physics Condensed Matter, 2007, 19, 386206.	0.7	63
53	Ion hydration studied by x-ray Compton scattering. Physical Review B, 2006, 73, .	1.1	32
54	Intra- and intermolecular effects in the Compton profile of water. Physical Review B, 2006, 73, .	1.1	44

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55	X-ray Raman Scattering Study of Aligned Polyfluorene. Macromolecules, 2006, 39, 9261-9266.	2.2	23
56	The evolution of inner-shell multielectronic X-ray spectra from threshold to saturation for low- to high-Z atoms. Radiation Physics and Chemistry, 2006, 75, 1434-1446.	1.4	17
57	Experimental determination of the core-excited electron density of states. Journal of Physics Condensed Matter, 2006, 18, 7327-7336.	0.7	35
58	Electronic stucture of methane hydrate studied by Compton scattering. Physical Review B, 2006, 73, .	1.1	13
59	Compton scattering study of water versus iceIh: Intra- and intermolecular structure. Physical Review E, 2006, 74, 031503.	0.8	27
60	Correlation of hydrogen bond lengths and angles in liquid water based on Compton scattering. Journal of Chemical Physics, 2006, 125, 084504.	1.2	55
61	Radiation hardness studies for the X-ray Solar Monitor (XSM) onboard the ESA SMART-1 mission. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2005, 538, 496-515.	0.7	4
62	Inelastic x-ray scattering study of collective electron excitations inMgB2. Physical Review B, 2005, 71, .	1.1	23
63	Compton scattering of elemental silicon at high pressure. Applied Physics Letters, 2005, 87, 191905.	1.5	11
64	Local Electronic Structure ofMgB2by X-Ray Raman Scattering at the BoronKEdge. Physical Review Letters, 2005, 94, .	2.9	34
65	Compton profiles for water and mixed water-neon clusters: A measure of coordination. Physical Review B, 2004, 70, .	1.1	30
66	Shake-up valence excitations inCuOby resonant inelastic x-ray scattering. Physical Review B, 2004, 70, .	1.1	42
67	Temperature dependence ofMgB2Compton profiles. Physical Review B, 2004, 69, .	1.1	8
68	Quantitative thickness determination using x-ray fluorescence: application to multiple layers. X-Ray Spectrometry, 2004, 33, 354-359.	0.9	46
69	X-ray hypersatellite spectra of hollow atoms. Journal of Electron Spectroscopy and Related Phenomena, 2004, 137-140, 293-297.	0.8	13
70	Near-threshold multielectronic effects in the CuKÎ±1,2x-ray spectrum. Physical Review A, 2003, 67, .	1.0	29
71	Diagram X-Ray Emission Spectra of a Hollow Atom: TheKhÎ±1,2andKhÎ²1,3Hypersatellites of Fe. Physical Review Letters, 2003, 91, 193001.	2.9	27
72	Fermi-surface mapping from Compton profiles:â€, Application to beryllium. Physical Review B, 2003, 68, .	1.1	11

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73	Electron momentum density in yttrium. Physical Review B, 2002, 66, .	1.1	24
74	High-momentum components and temperature dependence of the Compton profile of beryllium. Physical Review B, 2002, 66, .	1.1	14
75	Momentum dependence of fluorineK-edge core exciton in LiF. Physical Review B, 2002, 65, .	1.1	62
76	The SMART-1 X-ray solar monitor (XSM): calibrations for D-CIXS and independent coronal science. Planetary and Space Science, 2002, 50, 1345-1353.	0.9	36
77	Structure of the WLÎ±1,2x-ray spectrum. Physical Review A, 2001, 63, .	1.0	15
78	Resonant and non-resonant inelastic x-ray scattering. Journal of Physics Condensed Matter, 2001, 13, 7539-7555.	0.7	30
79	Asymmetry of Compton profiles. Journal of Physics and Chemistry of Solids, 2001, 62, 2205-2213.	1.9	22
80	Inelastic X-ray scattering (Compton) study of La1.85Sr0.15CuO4â€"anisotropic electron momentum distribution. Journal of Physics and Chemistry of Solids, 2001, 62, 2249-2256.	1.9	4
81	Core-hole-electron interaction in x-ray Raman scattering. Journal of Physics Condensed Matter, 2001, 13, 8039-8047.	0.7	30
82	Energy and polarization dependence of resonant inelastic X-ray scattering in Nd2CuO4. Journal of Physics and Chemistry of Solids, 2000, 61, 425-429.	1.9	4
83	The LÎ±' satellite of tungsten. Journal of Physics B: Atomic, Molecular and Optical Physics, 2000, 33, L649-L653.	0.6	6
84	CuKhÎ±1,2hypersatellites: Suprathreshold evolution of a hollow-atom x-ray spectrum. Physical Review A, 2000, 62, .	1.0	55
85	Energy dependence of experimental Be Compton profiles. Physical Review B, 2000, 62, 7956-7963.	1.1	64
86	Dynamic Structure Factor of Diamond and LiF Measured Using Inelastic X-Ray Scattering. Physical Review Letters, 2000, 84, 3907-3910.	2.9	56
87	Final-state interaction in Compton scattering from electron liquids. Physical Review B, 2000, 62, R7687-R7690.	1.1	23
88	Evolution from Threshold of a Hollow Atom's X-Ray Emission Spectrum: The CuKhÎ±1,2Hypersatellites. Physical Review Letters, 2000, 84, 3278-3281.	2.9	54
89	Electronic properties of YBa2Cu3O7â^'Î´ and Bi2Sr2CaCu2O8 superconductors studied by Compton scattering technique. Physica C: Superconductivity and Its Applications, 1999, 314, 19-26.	0.6	8
90	Electrode thickness measurement of a Si(Li) detector for the SIXA array. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 1998, 403, 425-430.	0.7	0

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91	Inelastic X-ray scattering study on Ag K-shell electrons utilizing coincidence technique on a synchrotron radiation source. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 1998, 416, 475-484.	0.7	3
92	The cross-section for magnetic Compton scattering up to 1 MeV. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 1997, 401, 463-475.	0.7	13
93	Onset and Near Threshold Evolution of the CuKÎ±X-Ray Satellites. Physical Review Letters, 1996, 76, 2424-2427.	2.9	53
94	High resolution Compton scattering study of Be. Physical Review B, 1996, 54, 5453-5459.	1.1	63
95	Compton-scattering study of the electronic properties of the transition-metal alloys FeAl, CoAl, and NiAl. Physical Review B, 1996, 53, 7714-7720.	1.1	20
96	The absolute double-differential Compton scattering cross section of Cu 1s electrons. Journal of Physics Condensed Matter, 1996, 8, 2153-2162.	0.7	12
97	Evidence for a Quadrupolar Excitation Channel at theLIIIEdge of Gadolinium by Resonant Inelastic X-Ray Scattering. Physical Review Letters, 1995, 74, 4931-4934.	2.9	114
98	Optical design and performance of the inelastic scattering beamline at the National Synchrotron Light Source. Review of Scientific Instruments, 1995, 66, 1699-1702.	0.6	47
99	High Resolution Compton Scattering in Fermi Surface Studies: Application to FeAl. Physical Review Letters, 1995, 75, 1984-1987.	2.9	32
100	Local-spin-selective x-ray absorption and x-ray magnetic circular dichroism of MnP. Physical Review B, 1995, 51, 1045-1052.	1.1	52
101	Highâ€resolution xâ€ray spectrometer based on a cylindrically bent crystal in nondispersive geometry. Review of Scientific Instruments, 1995, 66, 1525-1527.	0.6	19
102	XANES spectroscopy using high-resolution resonant Raman scattering: application to holmium. Journal of Physics Condensed Matter, 1992, 4, 879-886.	0.7	12
103	A highâ€resolution xâ€ray fluorescence spectrometer for nearâ€edge absorption studies. Review of Scientific Instruments, 1992, 63, 1125-1127.	0.6	59
104	Inelastic x-ray scattering in single-crystalC60. Physical Review B, 1992, 46, 12910-12913.	1.1	9
105	Spin-dependent x-ray absorption of MnO andMnF2. Physical Review B, 1992, 46, 14274-14277.	1.1	114
106	High-resolution inelastic x-ray scattering study of the boronKabsorption edge. Physical Review B, 1992, 45, 3878-3881.	1.1	10
107	Elimination of the inner-shell lifetime broadening in x-ray-absorption spectroscopy. Physical Review Letters, 1991, 67, 2850-2853.	2.9	479
108	Experimental LIII-shell hole widths in Yb and Ta. Journal of Physics Condensed Matter, 1990, 2, 5619-5626.	0.7	9

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109	Inelastic photon scattering fromK-shell electrons of Cu and Zr. Physical Review B, 1990, 41, 1224-1226.	1.1	25
110	Resonant Raman scattering and inner-shell hole widths in Cu, Zn and Ho. Journal of Physics Condensed Matter, 1989, 1, 5955-5964.	0.7	28