

# Niko Pontius

## List of Publications by Year in descending order

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69  
papers

3,885  
citations

218677

26  
h-index

118850

62  
g-index

69  
all docs

69  
docs citations

69  
times ranked

3608  
citing authors

#	ARTICLE	IF	CITATIONS
1	Transient ferromagnetic-like state mediating ultrafast reversal of antiferromagnetically coupled spins. <i>Nature</i> , 2011, 472, 205-208.	27.8	828
2	Femtosecond modification of electron localization and transfer of angular momentum in nickel. <i>Nature Materials</i> , 2007, 6, 740-743.	27.5	464
3	Distinguishing the ultrafast dynamics of spin and orbital moments in solids. <i>Nature</i> , 2010, 465, 458-461.	27.8	362
4	Femtosecond Microscopy of Surface Plasmon Polariton Wave Packet Evolution at the Silver/Vacuum Interface. <i>Nano Letters</i> , 2007, 7, 470-475.	9.1	264
5	Ultrafast spin transport as key to femtosecond demagnetization. <i>Nature Materials</i> , 2013, 12, 332-336.	27.5	262
6	Hot-Electron-Driven Enhancement of Spin-Lattice Coupling in Gd and Tb $\langle \text{mml:math} \text{xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"} \rangle \langle \text{mml:mn} \rangle 4 \langle \text{mml:mn} \rangle \langle \text{mml:mi} \rangle f \langle \text{mml:mi} \rangle \langle \text{mml:math} \rangle$ Ferromagnets Observed by Femtosecond X-Ray Magnetic Circular Dichroism. <i>Physical Review Letters</i> , 2011, 106, 127401.	7.8	151
7	Speed limit of the insulator-metal transition in $\text{MnO}$ . <i>Nature Materials</i> , 2013, 12, 882-886.	27.5	121
8	Stimulated X-ray emission for materials science. <i>Nature</i> , 2013, 501, 191-194.	27.8	102
9	Ultrafast angular momentum transfer in multisublattice ferrimagnets. <i>Nature Communications</i> , 2014, 5, 3466.	12.8	91
10	Ultrafast and Distinct Spin Dynamics in Magnetic Alloys. <i>Spin</i> , 2015, 05, 1550004.	1.3	81
11	FemtoSpeX: a versatile optical pump-soft X-ray probe facility with 100-fs X-ray pulses of variable polarization. <i>Journal of Synchrotron Radiation</i> , 2014, 21, 1090-1104.	2.4	71
12	Electronic potential of a chemisorption interface. <i>Physical Review B</i> , 2008, 78, .	3.2	70
13	Laser-induced generation and quenching of magnetization on FeRh studied with time-resolved x-ray magnetic circular dichroism. <i>Physical Review B</i> , 2010, 81, .	3.2	61
14	Femtosecond x-ray absorption spectroscopy of spin and orbital angular momentum in photoexcited Ni films during ultrafast demagnetization. <i>Physical Review B</i> , 2010, 81, .	3.2	61
15	Ultrafast Hot-Electron Dynamics Observed in Pt Using Time-Resolved Photoelectron Spectroscopy. <i>Physical Review Letters</i> , 2000, 84, 1132-1135.	7.8	51
16	Role of critical spin fluctuations in ultrafast demagnetization of transition-metal rare-earth alloys. <i>Physical Review B</i> , 2013, 87, .	3.2	50
17	Ultrafast and Energy-Efficient Quenching of Spin Order: Antiferromagnetism Beats Ferromagnetism. <i>Physical Review Letters</i> , 2017, 119, 197202.	7.8	49
18	Metal-to-ligand and ligand-to-metal charge transfer in thin films of Prussian blue analogues investigated by X-ray absorption spectroscopy. <i>Physical Chemistry Chemical Physics</i> , 2008, 10, 5882.	2.8	48

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19	Photon-Induced Thermal Desorption of CO from Small Metal-Carbonyl Clusters. Physical Review Letters, 2002, 88, 076102.	7.8	40
20	Simulation of two-photon photoemission from the bulksp-bands of Ag(111). Physical Review B, 2005, 72, .	3.2	39
21	Time-resolved resonant soft x-ray diffraction with free-electron lasers: Femtosecond dynamics across the Verwey transition in magnetite. Applied Physics Letters, 2011, 98, .	3.3	35
22	Size-dependent hot-electron dynamics in small Pd[sub n][sup âˆ]ˆ-clusters. Journal of Chemical Physics, 2001, 115, 10479.	3.0	33
23	Ultrafast relaxation dynamics of optically excited electrons inNi3âˆ“. Physical Review B, 2003, 67, .	3.2	30
24	$\text{Resonance of Chemisorbed Alkali Atoms on Noble Metals}$ . Physical Review Letters, 2008, 101, 266801.	7.8	30
25	Time-resolved x-ray magnetic circular dichroism study of ultrafast demagnetization in a CoPd ferromagnetic film excited by circularly polarized laser pulse. Physical Review B, 2012, 86, .	3.2	30
26	A novel monochromator for experiments with ultrashort X-ray pulses. Journal of Synchrotron Radiation, 2013, 20, 522-530.	2.4	27
27	Itinerant and Localized Magnetization Dynamics in Antiferromagnetic Ho. Physical Review Letters, 2016, 116, 257202.	7.8	27
28	Transient electronic and magnetic structures of nickel heated by ultrafast laser pulses. Physical Review B, 2009, 80, .	3.2	23
29	Photoelectron spectra of small LaOn- clusters: decreasing electron affinity upon increasing the number of oxygen atoms. European Physical Journal D, 1999, 9, 263-267.	1.3	22
30	Ultrafast reduction of the total magnetization in iron. Applied Physics Letters, 2014, 104, .	3.3	22
31	Ultrafast Optically Induced Ferromagnetic State in an Elemental Antiferromagnet. Physical Review Letters, 2021, 126, 107202.	7.8	22
32	Ultrafast dynamics of antiferromagnetic order studied by femtosecond resonant soft x-ray diffraction. Applied Physics Letters, 2010, 97, 062502.	3.3	21
33	Structural dynamics during laser-induced ultrafast demagnetization. Physical Review B, 2017, 95, .	3.2	21
34	Time-resolved photo-electron spectroscopy on mass-selected metal clusters using a regenerative femtosecond amplifier up to 100ÅHz. Applied Physics B: Lasers and Optics, 2000, 71, 351-356.	2.2	20
35	Photoinduced Demagnetization and Insulator-to-Metal Transition in Ferromagnetic InsulatingBaFeO3Thin Films. Physical Review Letters, 2016, 116, 256402.	7.8	20
36	Spectral properties of Cs and Ba on Cu(111) at very low coverage: Two-photon photoemission spectroscopy and electronic structure theory. Physical Review B, 2009, 80, .	3.2	18

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37	Chemisorption of benzene on metal dimer anions: A study by photoelectron detachment spectroscopy. <i>Journal of Chemical Physics</i> , 2001, 114, 8414-8420.	3.0	17
38	Photoelectron spectroscopy of GdO <sup>+</sup> . <i>Physical Review A</i> , 2002, 65, .	2.5	17
39	Femtosecond multi-photon photoemission of small transition metal cluster anions. <i>Journal of Electron Spectroscopy and Related Phenomena</i> , 2000, 106, 107-116.	1.7	13
40	Flipping the helicity of X-rays from an undulator at unprecedented speed. <i>Communications Physics</i> , 2020, 3, .	5.3	13
41	Exchange scaling of ultrafast angular momentum transfer in 4f antiferromagnets. <i>Nature Materials</i> , 2022, 21, 514-517.	27.5	12
42	Reply to 'Optical excitation of thin magnetic layers in multilayer structures'. <i>Nature Materials</i> , 2014, 13, 102-103.	27.5	11
43	Element-resolved ultrafast demagnetization rates in ferrimagnetic CoDy. <i>Physical Review B</i> , 2017, 96, .	3.2	11
44	An x-ray autocorrelator and delay line for the VUV-FEL at TTF/DESY. , 2005, , .		10
45	Deterministic control of an antiferromagnetic spin arrangement using ultrafast optical excitation. <i>Communications Physics</i> , 2020, 3, .	5.3	10
46	Time-resolved photoelectron spectra of optically excited states in Pd <sup>+</sup> . <i>Journal of Electron Spectroscopy and Related Phenomena</i> , 2001, 114-116, 163-167.	1.7	9
47	The confocal plane grating spectrometer at BESSY II. <i>Journal of Electron Spectroscopy and Related Phenomena</i> , 2013, 188, 133-139.	1.7	9
48	The role of space charge in spin-resolved photoemission experiments. <i>New Journal of Physics</i> , 2014, 16, 043031.	2.9	9
49	Influence of the pump pulse wavelength on the ultrafast demagnetization of Gd(O <sup>+</sup> ) thin films. <i>Journal of Physics Condensed Matter</i> , 2017, 29, 234003.	1.8	9
50	Analysis of the halo background in femtosecond slicing experiments. <i>Journal of Synchrotron Radiation</i> , 2016, 23, 700-711.	2.4	9
51	Experimental confirmation of the delayed Ni demagnetization in FeNi alloy. <i>Applied Physics Letters</i> , 2022, 120, .	3.3	8
52	Laser-pump/X-ray-probe experiments with electrons ejected from a Cu(111) target: space-charge acceleration. <i>Journal of Synchrotron Radiation</i> , 2016, 23, 1158-1170.	2.4	7
53	Ultrafast Electron and Spin Dynamics in Nickel Probed With Femtosecond X-Ray Pulses. <i>IEEE Transactions on Magnetics</i> , 2008, 44, 1957-1961.	2.1	6
54	Probing the non-equilibrium transient state in magnetite by a jitter-free two-color X-ray pump and X-ray probe experiment. <i>Structural Dynamics</i> , 2018, 5, 054501.	2.3	6

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55	Accelerating the laser-induced demagnetization of a ferromagnetic film by antiferromagnetic order in an adjacent layer. <i>Physical Review B</i> , 2020, 102, .	3.2	5
56	Time-resolved photoelectron spectra of Pt <sub>2</sub> (N <sub>2</sub> ) <sup>+</sup> . <i>Journal of Electron Spectroscopy and Related Phenomena</i> , 2005, 144-147, 91-96.	1.7	4
57	Versatile soft X-ray-optical cross-correlator for ultrafast applications. <i>Structural Dynamics</i> , 2016, 3, 054304.	2.3	4
58	Dynamics of space-charge acceleration of X-ray generated electrons emitted from a metal surface. <i>Journal of Electron Spectroscopy and Related Phenomena</i> , 2017, 220, 40-45.	1.7	4
59	Ultrafast magnetism as seen by x-rays. <i>Proceedings of SPIE</i> , 2012, , .	0.8	3
60	The FemtoSpeX facility at BESSY II. <i>Journal of Large-scale Research Facilities JLSRF</i> , 0, 2, A46.	0.0	3
61	Photo-induced antiferromagnetic-ferromagnetic and spin-state transition in a double-perovskite cobalt oxide thin film. <i>Communications Physics</i> , 2022, 5, .	5.3	3
62	Ultrafast probe of magnetization dynamics in multiferroic $\text{CoCr}_2\text{O}_4$ and $\text{Co}_4\text{O}_9$ . <i>Physical Review B</i> , 2022, 105, .	3.2	2
63	Using the photoinduced L <sub>3</sub> resonance shift in Fe and Ni as time reference for ultrafast experiments at low flux soft x-ray sources. <i>Structural Dynamics</i> , 2021, 8, 044304.	2.3	1
64	Engineering Ultrafast Magnetism. <i>Springer Proceedings in Physics</i> , 2015, , 297-299.	0.2	1
65	Ultrashort soft x-ray pulses from a femtosecond slicing source for time-resolved laser pump- x-ray probe experiments. <i>Springer Series in Chemical Physics</i> , 2009, , 119-121.	0.2	1
66	Photoinduced transient states of antiferromagnetic orderings in $\text{La}_{1/3}\text{Sr}_{2/3}\text{FeO}_3$ and $\text{SrFeO}_3$ thin films observed through time-resolved resonant soft x-ray scattering. <i>New Journal of Physics</i> , 2022, 24, 043012.	2.9	1
67	X-ray Absorption Spectroscopy on the fs Time Scale: Ultrafast Electron and Spin Dynamics in Nickel. <i>Springer Series in Chemical Physics</i> , 2009, , 194-196.	0.2	0
68	Time and momentum resolved resonant magnetic x-ray diffraction on EuTe. <i>EPJ Web of Conferences</i> , 2013, 41, 03014.	0.3	0
69	Element- and time-resolved dynamics in rare-earth/transition metals alloys. <i>Springer Proceedings in Physics</i> , 2015, , 310-312.	0.2	0