

Rudolf RÃ¼ffer

List of Publications by Year in descending order

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57
papers

2,521
citations

218381

26
h-index

197535

49
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58
all docs

58
docs citations

58
times ranked

1878
citing authors

#	ARTICLE	IF	CITATIONS
1	X-ray dichroism in polyimide caused by non-resonant scattering. Journal of Synchrotron Radiation, 2021, 28, 176-180.	1.0	0
2	Coherent X-ray optical control of nuclear excitons. Nature, 2021, 590, 401-404.	13.7	26
3	Lattice Dynamics and Structural Phase Transitions in Eu_2O_3 . Inorganic Chemistry, 2021, 60, 9571-9579.	1.9	24
4	Unique surface sensitivity to ferro- and antiferromagnetic phases by polarization analysis in synchrotron Mössbauer reflectivity. Surfaces and Interfaces, 2021, 27, 101521.	1.5	4
5	Phonon confinement and interface lattice dynamics of ultrathin high- <i>k</i> rare earth sesquioxide films: the case of Eu_2O_3 on YSZ(001). Nanoscale Advances, 2021, 4, 19-25.	2.2	2
6	Accessing the non-ergodicity factor of o-terphenyl via multi-line nuclear \hat{I}^3 -resonance time-domain interferometry. Philosophical Magazine, 2020, 100, 2646-2657.	0.7	3
7	Phonon confinement and spin-phonon coupling in tensile-strained ultrathin EuO films. Nanoscale, 2019, 11, 10968-10976.	2.8	11
8	High-pressure magnetism of the double perovskite $\text{Sr}_2\text{Mn}_2\text{O}_7$ studied by synchrotron Fe Mössbauer spectroscopy. Physical Review B, 2019, 100, 080401.	1.1	8
9	Polarization Analysis in Mössbauer Reflectometry with Synchrotron Mössbauer Source. Condensed Matter, 2019, 4, 8.	0.8	10
10	Polarization selection in Mössbauer reflectivity for magnetic multilayer investigation. Journal of Physics: Conference Series, 2019, 1389, 012016.	0.3	2
11	Nuclear resonance reflectivity from a $[\text{Fe}^{57}/\text{Cr}]_{30}$ multilayer with the Synchrotron Mössbauer Source. Journal of Synchrotron Radiation, 2018, 25, 473-483.	1.0	15
12	High pressure magnetic, structural, and electronic transitions in multiferroic $\text{Ba}_3\text{NbFe}_3\text{Si}_2\text{O}_{14}$. Applied Physics Letters, 2018, 112, 242405.	1.5	6
13	Field-temperature evolution of the magnetic state of $[\text{Fe}(1.2 \text{ \AA}.)/\text{Cr}(10.5 \text{ \AA}.)]_{30}$ structure by Mössbauer reflectometry with synchrotron radiation. Journal of Magnetism and Magnetic Materials, 2017, 440, 225-229.	1.0	6
14	Rabi oscillations of X-ray radiation between two nuclear ensembles. Nature Photonics, 2017, 11, 720-725.	15.6	43
15	Portable double-sided pulsed laser heating system for time-resolved geoscience and materials science applications. Review of Scientific Instruments, 2017, 88, 084501.	0.6	24
16	Spectral narrowing of x-ray pulses for precision spectroscopy with nuclear resonances. Science, 2017, 357, 375-378.	6.0	41
17	A new experimental scheme for nuclear \hat{I}^3 -resonance time-domain interferometry. Review of Scientific Instruments, 2017, 88, 105114.	0.6	8
18	Anomalous Lattice Dynamics of Eu_2O_3 Role of Interfaces Unveiled. Physical Review Letters, 2016, 117, 276101.	2.9	12

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19	Collective strong coupling of X-rays and nuclei in a nuclear optical lattice. Nature Photonics, 2016, 10, 445-449.	15.6	34
20	Lattice Dynamics of EuO: Evidence for Giant Spin-Phonon Coupling. Physical Review Letters, 2016, 116, 185501.	2.9	26
21	Observation of superconductivity in hydrogen sulfide from nuclear resonant scattering. Science, 2016, 351, 1303-1306.	6.0	121
22	Striking anomalies in the shape of Mössbauer spectra measured near σ -magnetic Bragg reflection from [Fe/Cr] multilayer. Hyperfine Interactions, 2016, 237, 1.	0.2	4
23	Time differentiated nuclear resonance spectroscopy coupled with pulsed laser heating in diamond anvil cells. Review of Scientific Instruments, 2015, 86, 114501.	0.6	13
24	Oxidation state of the lower mantle: In situ observations of the iron electronic configuration in bridgmanite at extreme conditions. Earth and Planetary Science Letters, 2015, 423, 78-86.	1.8	30
25	Tunable Subluminal Propagation of Narrow-band X-Ray Pulses. Physical Review Letters, 2015, 114, 203601.	2.9	58
26	Performance of a silicon monochromator under high heat load. Journal of Synchrotron Radiation, 2014, 21, 315-324.	1.0	34
27	Electronic spin state of Fe,Al-containing MgSiO ₃ perovskite at lower mantle conditions. Lithos, 2014, 189, 167-172.	0.6	19
28	Effect of iron oxidation state on the electrical conductivity of the Earth's lower mantle. Nature Communications, 2013, 4, 1427.	5.8	60
29	Portable double-sided laser-heating system for Mössbauer spectroscopy and X-ray diffraction experiments at synchrotron facilities with diamond anvil cells. Review of Scientific Instruments, 2012, 83, 124501.	0.6	50
30	The ⁵⁷ Fe Synchrotron Mössbauer Source at the ESRF. Journal of Synchrotron Radiation, 2012, 19, 559-569.	1.0	171
31	Depth resolved hyperfine interactions with standing waves in [W/Si] ₁₀ /Si/Ag/ ⁵⁷ Fe/Ag/Si multilayer. Journal of Physics: Conference Series, 2010, 217, 012116.	0.3	2
32	Anisotropic lattice dynamics of FePt L_{10} films. Physical Review B, 2010, 82, .	1.1	13
33	Noncollinear Magnetization Structure at the Thickness-Driven Spin-Reorientation Transition in Epitaxial Fe Films on W(110). Physical Review Letters, 2010, 105, 027206.	2.9	44
34	Collective Lamb Shift in Single-Photon Superradiance. Science, 2010, 328, 1248-1251.	6.0	338
35	Vibrational thermodynamics of Fe ₉₀ Zr ₇ B ₃ nanocrystalline alloy from nuclear inelastic scattering. Physical Review B, 2010, 82, .	1.1	27
36	The magnetic structure of coupled Fe/FeO multilayers revealed by nuclear resonant and neutron scattering methods. New Journal of Physics, 2009, 11, 013038.	1.2	17

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37	Study of nano-scale diffusion in thin films and multilayers. <i>Hyperfine Interactions</i> , 2008, 182, 23-30.	0.2	5
38	Vibrational Properties of Nanograins and Interfaces in Nanocrystalline Materials. <i>Physical Review Letters</i> , 2008, 100, 235503.	2.9	41
39	An ultrahigh vacuum system for studies of thin films and nanostructures by nuclear resonance scattering of synchrotron radiation. <i>Review of Scientific Instruments</i> , 2008, 79, 045108.	0.6	33
40	Phonons at the Fe(110) Surface. <i>Physical Review Letters</i> , 2007, 99, 066103.	2.9	46
41	Phonons in Iron: From the Bulk to an Epitaxial Monolayer. <i>Physical Review Letters</i> , 2007, 99, 185501.	2.9	56
42	Self-diffusion of iron in L10-ordered FePt thin films. <i>Physical Review B</i> , 2006, 74, .	1.1	43
43	Fe diffusion in amorphous and nanocrystalline alloys studied using nuclear resonance reflectivity. <i>Physical Review B</i> , 2005, 72, .	1.1	37
44	Radiative decoupling and coupling of nuclear oscillators by stepwise Doppler-energy shifts. <i>Physical Review A</i> , 2002, 65, .	1.0	17
45	Imaging the Magnetic Spin Structure of Exchange-Coupled Thin Films. <i>Physical Review Letters</i> , 2002, 89, 237201.	2.9	112
46	Title is missing!. <i>Hyperfine Interactions</i> , 2001, 136/137, 295-300.	0.2	8
47	Title is missing!. <i>Hyperfine Interactions</i> , 2001, 136/137, 439-444.	0.2	9
48	Nuclear inelastic scattering. , 2000, 128, 255-272.		34
49	Moessbauer reflectometry of ultrathin multilayer Zr(10 nm)/[57Fe(1.6 nm)/Cr(1.7 nm) \times 26]/Cr(50 nm) film using synchrotron radiation. <i>Journal of Alloys and Compounds</i> , 1999, 286, 322-332.	2.8	13
50	Nuclear inelastic scattering. , 1998, 113, 59-79.		65
51	Quasielastic Scattering of Synchrotron Radiation by Time Domain Interferometry. <i>Physical Review Letters</i> , 1997, 79, 2823-2826.	2.9	79
52	Synchrotron Mössbauer source. <i>Physical Review B</i> , 1997, 55, 5811-5815.	1.1	111
53	X-ray optics for $\hat{1}/4$ eV-resolved spectroscopy. <i>Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment</i> , 1997, 394, 251-255.	0.7	26
54	Nuclear Resonance Beamline at ESRF. <i>Hyperfine Interactions</i> , 1996, 97-98, 589-604.	0.2	385

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55	Transverse X-Ray Coherence in Nuclear Scattering of Synchrotron Radiation. Physical Review Letters, 1996, 77, 4808-4811.	2.9	33
56	Nuclear resonance scattering of synchrotron radiation at the 21.5 keV resonance of ¹⁵¹ Eu. Europhysics Letters, 1996, 35, 671-676.	0.7	43
57	Nuclear Bragg diffraction using synchrotron radiation A new method for hyperfine spectroscopy. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 1991, 303, 495-502.	0.7	17