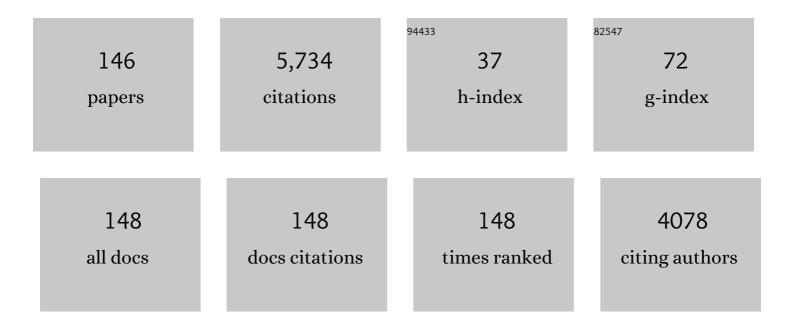
Mathias Richter

List of Publications by Year in descending order

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#	Article	IF	CITATIONS
1	Chargeâ€Promoted Selfâ€Metalation of Porphyrins on an Oxide Surface. Angewandte Chemie - International Edition, 2021, 60, 5078-5082.	13.8	17
2	Ladungsunterstützte Selbstmetallierung von Porphyrinen auf OxidoberflÃ e hen. Angewandte Chemie, 2021, 133, 5138-5142.	2.0	3
3	Going beyond Pentacene: Photoemission Tomography of a Heptacene Monolayer on Ag(110). Journal of Physical Chemistry C, 2021, 125, 2918-2925.	3.1	7
4	Controlling the electronic and physical coupling on dielectric thin films. Beilstein Journal of Nanotechnology, 2020, 11, 1492-1503.	2.8	6
5	Kekulene: On-Surface Synthesis, Orbital Structure, and Aromatic Stabilization. ACS Nano, 2020, 14, 15766-15775.	14.6	30
6	Metrology with Synchrotron Radiation. , 2020, , 1575-1610.		1
7	Can photoemission tomography be useful for small, strongly-interacting adsorbate systems?. New Journal of Physics, 2019, 21, 043003.	2.9	9
8	Identifying surface reaction intermediates with photoemission tomography. Nature Communications, 2019, 10, 3189.	12.8	18
9	Validation of thin film TiO ₂ optical constants by reflectometry and ellipsometry in the VUV spectral range. Measurement Science and Technology, 2019, 30, 045201.	2.6	9
10	An X-ray gas monitor for free-electron lasers. Journal of Synchrotron Radiation, 2019, 26, 1092-1100.	2.4	37
11	Metrology with Synchrotron Radiation. , 2019, , 1-35.		1
12	Measurement of the absolute number of photons of the hard X-ray beamline at the Linac Coherent Light Source. Journal of Synchrotron Radiation, 2019, 26, 320-327.	2.4	7
13	Pulse power measurements and attenuator characterization of the hard X-ray beamline at the Linac Coherent Light Source. , 2019, , .		0
14	PTB's radiometric scales for UV and VUV source calibration based on synchrotron radiation. Metrologia, 2018, 55, 386-391.	1.2	8
15	Transverse resonance island buckets for synchrotron-radiation based electron time-of-flight spectroscopy. Review of Scientific Instruments, 2018, 89, 103114.	1.3	3
16	Traceable measurements of He, Ne, Ar, Kr, and Xe photoionization cross sections in the EUV spectral range. Journal of Physics B: Atomic, Molecular and Optical Physics, 2018, 51, 135004.	1.5	5
17	Multiple Auger cycle photoionisation of manganese atoms by short soft x-ray pulses. New Journal of Physics, 2017, 19, 043002.	2.9	6
18	Uncertainty analysis for the determination of B_4C optical constants by angle-dependent reflectance measurement for 40  nm to 80  nm wavelength. Applied Optics, 2017, 56, 5768.	1.8	11

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19	Calibration of space instruments at the Metrology Light Source. AIP Conference Proceedings, 2016, , .	0.4	4
20	Source-based calibration of space instruments using calculable synchrotron radiation. Journal of Astronomical Telescopes, Instruments, and Systems, 2016, 2, 044002.	1.8	4
21	Irradiation-induced degradation of PTB7 investigated by valence band and S 2 <i>p</i> photoelectron spectroscopy. Nanotechnology, 2016, 27, 324005.	2.6	8
22	A new facility for the synchrotron radiation-based calibration of transfer radiation sources in the ultraviolet and vacuum ultraviolet spectral range. Review of Scientific Instruments, 2015, 86, 013106.	1.3	9
23	Exploring three-dimensional orbital imaging with energy-dependent photoemission tomography. Nature Communications, 2015, 6, 8287.	12.8	76
24	Development of experimental techniques for the characterization of ultrashort photon pulses of extreme ultraviolet free-electron lasers. Physical Review Special Topics: Accelerators and Beams, 2014, 17, .	1.8	55
25	Absolute pulse energy measurements of soft x-rays at the Linac Coherent Light Source. Optics Express, 2014, 22, 21214.	3.4	61
26	A synchrotron-radiation-based variable angle ellipsometer for the visible to vacuum ultraviolet spectral range. Review of Scientific Instruments, 2014, 85, 055117.	1.3	15
27	Time-Dependent Multiphoton Ionization of Xenon in the Soft-X-Ray Regime. Physical Review Letters, 2014, 112, .	7.8	31
28	Validation of a new facility at the Metrology Light Source for the calibration of radiation sources in the wavelength range from 116 nm to 400 nm. Metrologia, 2014, 51, 528-538.	1.2	11
29	Multiple ionization of neon by soft x-rays at ultrahigh intensity. Journal of Physics B: Atomic, Molecular and Optical Physics, 2013, 46, 164025.	1.5	16
30	UV and VUV calibration capabilities at the Metrology Light Source for solar and atmospheric research. AIP Conference Proceedings, 2013, , .	0.4	5
31	The impact of pulse duration on multiphoton ionization in the soft X-ray regime. Proceedings of SPIE, 2013, , .	0.8	2
32	Pulse energy measurement at the hard x-ray laser in Japan. Applied Physics Letters, 2012, 101, .	3.3	56
33	Current capabilities at the Metrology Light Source. Metrologia, 2012, 49, S146-S151.	1.2	36
34	Radiometric comparison of the primary source standard â€~Metrology Light Source' to a primary detector standard. Metrologia, 2011, 48, 219-225.	1.2	7
35	Polarizing and non-polarizing mirrors for the hydrogen Lyman-α radiation at 121.6 nm. Applied Physics A: Materials Science and Processing, 2011, 102, 641-649.	2.3	22
36	Shot-to-shot and average absolute photon flux measurements of a femtosecond laser high-order harmonic photon source. New Journal of Physics, 2011, 13, 093003.	2.9	16

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37	Atomic plasma excitations in the field of a soft x-ray laser. Journal of Physics B: Atomic, Molecular and Optical Physics, 2011, 44, 075601.	1.5	18
38	Bilateral NIST–PTB comparison of spectral responsivity in the VUV. Metrologia, 2011, 48, 02001-02001.	1.2	8
39	Synchrotron radiation-based bilateral intercomparison of ultraviolet source calibrations. Metrologia, 2011, 48, 261-267.	1.2	7
40	A new soft x-ray autocorrelator—direct evaluation of the temporal properties of FEL pulses at 24 nm. , 2010, , .		0
41	Ultraviolet and vacuum-ultraviolet detector-based radiometry at the Metrology Light Source. Measurement Science and Technology, 2010, 21, 125101.	2.6	47
42	Experimental determination of optical constants of MgF2 and AlF3 thin films in the vacuum ultra-violet wavelength region (60–124nm), and its application to optical designs. Optics Communications, 2010, 283, 1351-1358.	2.1	38
43	Measurement of the single-shot pulse energy of a free electron laser using a cryogenic radiometer. Metrologia, 2010, 47, 518-521.	1.2	10
44	Two-Photon Inner-Shell Ionization in the Extreme Ultraviolet. Physical Review Letters, 2010, 105, 013001.	7.8	35
45	Non-linear processes in the interaction of atoms and molecules with intense EUV and X-ray fields from SASE free electron lasers (FELs). Journal of Modern Optics, 2010, 57, 1015-1040.	1.3	110
46	Temperature-dependent Urbach tail measurements of lutetium aluminum garnet single crystals. Physical Review B, 2010, 81, .	3.2	17
47	Multiphoton ionization of atoms with soft x-ray pulses. Journal of Physics B: Atomic, Molecular and Optical Physics, 2010, 43, 194005.	1.5	49
48	Radiometric comparison for measuring the absolute radiant power of a free-electron laser in the extreme ultraviolet. Metrologia, 2010, 47, 21-23.	1.2	22
49	Temperature-dependent Urbach tail measurements of <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"> <mml:mrow> <mml:msub> <mml:mrow> <mml:mtext>CaF </mml:mtext> </mml:mrow> <mml:mn crystals. Physical Review B. 2009. 79</mml:mn </mml:msub></mml:mrow></mml:math 	>2∛mml:r	nn ¹² /mml:ms
50	Resonant multiphoton processes in the soft-x-ray regime. Physical Review A, 2009, 80, .	2.5	19
51	Experiments at FLASH. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2009, 601, 108-122.	1.6	88
52	A quarterâ€century of metrology using synchrotron radiation by PTB in Berlin. Physica Status Solidi (B): Basic Research, 2009, 246, 1415-1434.	1.5	117
53	Extreme Ultraviolet Laser Excites Atomic Giant Resonance. Physical Review Letters, 2009, 102, 163002.	7.8	119
54	Recent developments of wide-bandgap semiconductor based UV sensors. Diamond and Related Materials, 2009, 18, 860-864.	3.9	92

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55	Direct autocorrelation of soft-x-ray free-electron-laser pulses by time-resolved two-photon double ionization of He. Physical Review A, 2009, 80, .	2.5	101
56	Pre-flight calibration of LYRA, the solar VUV radiometer on board PROBA2. Astronomy and Astrophysics, 2009, 508, 1085-1094.	5.1	39
57	Nonlinear photoionization in the soft X-ray regime. Applied Physics A: Materials Science and Processing, 2008, 92, 473-478.	2.3	7
58	New developments on diamond photodetector for VUV solar observations. Semiconductor Science and Technology, 2008, 23, 035026.	2.0	38
59	Gas detectors for x-ray lasers. Journal of Applied Physics, 2008, 103, .	2.5	147
60	Spatio-temporal coherence of free electron laser pulses in the soft x-ray regime. Optics Express, 2008, 16, 19909.	3.4	123
61	Characterization of AlN metal-semiconductor-metal diodes in the spectral range of 44–360nm: Photoemission assessments. Applied Physics Letters, 2008, 92, .	3.3	53
62	Photoelectron spectroscopy as a non-invasive method to monitor SASE-FEL spectra. Journal of Instrumentation, 2008, 3, P02003-P02003.	1.2	19
63	Photon-matter interaction at short wavelengths and ultra-high intensity – Gas-phase experiments at FLASH. Journal of Physics: Conference Series, 2008, 141, 012014.	0.4	8
64	Al x Ga 1-x N focal plane arrays for imaging applications in the extreme ultraviolet (EUV) wavelength range. , 2007, , .		3
65	High field physics with XUV pulses from the Free Electron Laser in Hamburg: Atoms and Clusters. , 2007, , .		Ο
66	Performance of the monochromator beamline at FLASH. Journal of Optics, 2007, 9, 749-756.	1.5	45
67	Polarization-dependent vacuum-ultraviolet reflectometry using elliptically polarized synchrotron radiation. Applied Optics, 2007, 46, 7797.	2.1	11
68	X-ray-laser interaction with matter and the role of multiphoton ionization: Free-electron-laser studies on neon and helium. Physical Review A, 2007, 75, .	2.5	151
69	Photoelectric Effect at Ultrahigh Intensities. Physical Review Letters, 2007, 99, 213002.	7.8	237
70	Operation of a free-electron laser from the extreme ultraviolet to the water window. Nature Photonics, 2007, 1, 336-342.	31.4	1,455
71	The Metrology Light Source – The new dedicated electron storage ring of PTB. Nuclear Instruments & Methods in Physics Research B, 2007, 258, 445-452.	1.4	17
72	Multi-photon ionization of molecular nitrogen by femtosecond soft x-ray FEL pulses. Journal of Physics B: Atomic, Molecular and Optical Physics, 2006, 39, L299-L304.	1.5	56

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73	Diamond detectors for LYRA, the solar VUV radiometer on board PROBA2. Diamond and Related Materials, 2006, 15, 802-806.	3.9	25
74	Absolute measurement of F_2-laser power at 157 nm. Applied Optics, 2006, 45, 3325.	2.1	0
75	Multilayer optics with spectral purity layers for the EUV wavelength range. , 2006, , .		3
76	Calibration of space instrumentation with synchrotron radiation. Advances in Space Research, 2006, 37, 265-272.	2.6	23
77	The PTB high-accuracy spectral responsivity scale in the VUV and x-ray range. Metrologia, 2006, 43, S125-S129.	1.2	63
78	Performance of diamond detectors for VUV applications. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2006, 568, 398-405.	1.6	31
79	Radiometric characteristics of new diamond PIN photodiodes. Measurement Science and Technology, 2006, 17, 913-917.	2.6	38
80	Method based on atomic photoionization for spot-size measurement on focused soft x-ray free-electron laser beams. Applied Physics Letters, 2006, 89, 221114.	3.3	32
81	Stability of vacuum-ultraviolet radiometric transfer standards: Electron cyclotron resonance versus hollow cathode source. Review of Scientific Instruments, 2005, 76, 023101.	1.3	2
82	Pulse energy measurements of extreme ultraviolet undulator radiation. Measurement Science and Technology, 2004, 15, 437-443.	2.6	3
83	FEL beam metrology with a gas-monitor detector. , 2004, , .		2
84	High-accuracy VUV reflectometry at selectable sample temperatures. , 2004, , .		5
85	Total electron-impact ionization cross sections of helium. Journal of Physics B: Atomic, Molecular and Optical Physics, 2004, 37, 3215-3226.	1.5	25
86	Absolute Measurement Of EUV Radiation From An Undulator. AIP Conference Proceedings, 2004, , .	0.4	0
87	Gas-Monitor Detector for Intense and Pulsed VUV/EUV Free-Electron Laser Radiation. AIP Conference Proceedings, 2004, , .	0.4	9
88	Development of imaging arrays for solar UV observations based on wide band gap materials. , 2004, , .		11
89	Solar-Blind Diamond Detectors for Lyra, the Solar VUV Radiometer on Board Proba II. Experimental Astronomy, 2003, 16, 141-148.	3.7	9
90	Measurement of gigawatt radiation pulses from a vacuum and extreme ultraviolet free-electron laser. Applied Physics Letters, 2003, 83, 2970-2972.	3.3	107

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91	Spatial anisotropy of the exciton level inCaF2at 11.1 eV and its relation to the weak optical anisotropy at 157 nm. Physical Review B, 2003, 67, .	3.2	16
92	Source and detector calibration in the UV and VUV at BESSY II. Metrologia, 2003, 40, S107-S110.	1.2	37
93	On the optical anisotropy in the cubic crystal of CaF 2 : scaling arguments and their relation to dispersing absorption. , 2003, , .		Ο
94	Photoionization Cross Sections of Kr and Xe from Threshold up to 1000 eV. AIP Conference Proceedings, 2003, , .	0.4	9
95	Decay of theAr2sâ^'1and2pâ^'1andKr3pâ^'1and3dâ^'1hole states studied by photoelectron-ion coincidence spectroscopy. Physical Review A, 2002, 65, .	2.5	55
96	Metrology of pulsed radiation for 157-nm lithography. Applied Optics, 2002, 41, 7167.	2.1	38
97	The two normal-incidence monochromator beam lines of PTB at BESSY II. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2001, 467-468, 605-608.	1.6	30
98	A photoelectron–photoion coincidence method for the investigation of decay probabilities after innershell photoionization. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2001, 467-468, 1477-1480.	1.6	1
99	Determination of the electron–hole pair creation energy for semiconductors from the spectral responsivity of photodiodes. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2000, 439, 208-215.	1.6	81
100	New developments in the radiance calibration of deuterium lamps in the UV and VUV spectral range at the PTB. Metrologia, 2000, 37, 563-566.	1.2	14
101	The PTB high-accuracy spectral responsivity scale in the ultraviolet. Metrologia, 2000, 37, 515-518.	1.2	16
102	Multiplet and lifetime effects in the4dphotoelectron spectrum of Eu. Physical Review A, 2000, 61, .	2.5	26
103	Measurements of electron-impact ionization cross sections of argon, krypton, and xenon by comparison with photoionization. Physical Review A, 2000, 61, .	2.5	67
104	4dPhotoionization of Free Singly Charged Xenon Ions. Physical Review Letters, 1999, 82, 2068-2070.	7.8	25
105	Radiometry using synchrotron radiation at PTB. Journal of Electron Spectroscopy and Related Phenomena, 1999, 101-103, 1013-1018.	1.7	15
106	Quantum efficiency of cesium iodide photocathodes in the 120–220nm spectral range traceable to a primary detector standard. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 1999, 438, 94-103.	1.6	34
107	High-accuracy detector calibration in the 3–1500ÂeV spectral range at the PTB radiometry laboratory. Journal of Synchrotron Radiation, 1998, 5, 866-868.	2.4	6
108	Photoelectron spectroscopy on atomic Pr and Nd in the 4d giant resonance region. Journal of Physics B: Atomic, Molecular and Optical Physics, 1998, 31, 3875-3884.	1.5	2

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109	Characterization of photodiodes as transfer detector standards in the 120 nm to 600 nm spectral range. Metrologia, 1998, 35, 355-362.	1.2	45
110	Final ion-charge resolving electron spectroscopy for the investigation of atomic photoionization processes: Xe in the region of the4d→εfresonance. Physical Review A, 1998, 57, 282-291.	2.5	30
111	4dâ^'1multiplet structure of rare-earth atoms studied by photoelectron-ion coincidence spectroscopy. Physical Review A, 1998, 57, 3523-3533.	2.5	13
112	Inner-shell resonances in metastableCa+ions. Physical Review A, 1997, 55, 3941-3944.	2.5	13
113	Final Ion-Charge Resolving Electron Spectroscopy: Photoionization Studies on Sm and Eu. Physical Review Letters, 1996, 76, 4320-4323.	7.8	12
114	PtSi–n–Si Schottkyâ€barrier photodetectors with stable spectral responsivity in the 120–250 nm spectral range. Applied Physics Letters, 1996, 69, 3662-3664.	3.3	69
115	First Angle-Resolved Photoelectron Measurements following Inner-Shell Resonant Excitation in a Singly Charged Ion. Physical Review Letters, 1996, 76, 4496-4499.	7.8	29
116	Combined electron and ion spectroscopy with synchrotron radiation of free metal atoms and ions. Journal of Electron Spectroscopy and Related Phenomena, 1995, 76, 21-28.	1.7	5
117	Photoionization experiments on atomic Pt in the range 40-90 eV. Journal of Physics B: Atomic, Molecular and Optical Physics, 1994, 27, 4123-4131.	1.5	7
118	Direct Double Photoionization Involving Inner and Outer Electrons: First Experimental Determination and Many-Body Calculations of an Absolute Cross Section. Physical Review Letters, 1994, 73, 3074-3077.	7.8	23
119	Electron-ion coincidence spectroscopy on atomic barium in the excitation range of the 4dgiant resonance. Physical Review Letters, 1994, 72, 2847-2850.	7.8	13
120	Direct double photoionization of atomic sodium. Physical Review A, 1994, 50, 4868-4876.	2.5	19
121	Photoion spectroscopy of atomic Ho, Er and Tm in the region of the 4d giant resonances. Journal of Physics B: Atomic, Molecular and Optical Physics, 1993, 26, 4091-4097.	1.5	3
122	First observation of a Fano profile following one step autoionization into a double photoionization continuum. European Physical Journal Special Topics, 1993, 03, C6-217-C6-226.	0.2	10
123	Photoelectron spectroscopy of laser-excited aligned Ca atoms in the region of the 3p excitation. Journal of Physics B: Atomic, Molecular and Optical Physics, 1992, 25, 923-930.	1.5	14
124	The combined use of a singly charged ion beam and undulator radiation for photoelectron spectrometry studies on atomic ions. Review of Scientific Instruments, 1992, 63, 1389-1392.	1.3	14
125	Resonant Ionization of Atomic Na in the 2 p Subshell: Strong Enhancement of the Conjugate Shake-up Channel in the Vicinity of the 2 s Ionization Threshold. Europhysics Letters, 1991, 14, 747-753.	2.0	21
126	First observation of photoelectron spectra emitted in the photoionization of a singly charged-ion beam with synchrotron radiation. Physical Review Letters, 1991, 67, 576-579.	7.8	46

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127	Photoelectron Spectroscopy of Laser-Excited Aligned Free Atoms. Physica Scripta, 1990, T31, 28-31.	2.5	12
128	Autoionization of the Ar, K and Ca 2p54s, 3d-resonances: validity of the spectator model. Journal of Electron Spectroscopy and Related Phenomena, 1990, 51, 407-416.	1.7	32
129	2 <i>s</i> Photoionization in Ground-State and in Laser-Excited Sodium Atoms. Europhysics Letters, 1990, 12, 35-40.	2.0	36
130	Z-dependent difference between experimental and theoretical 2p-core-hole widths of atomic rare earths. Journal of Physics B: Atomic, Molecular and Optical Physics, 1990, 23, L811-L816.	1.5	8
131	Autoionization of the Ca 2p53d core resonances: Breakdown of the spectator model. Physical Review A, 1989, 39, 4319-4322.	2.5	33
132	Experimental study of atomic 4dgiant resonances by photoabsorption and photoelectron spectroscopy: Sm, Eu, and Gd. Physical Review A, 1989, 40, 7007-7019.	2.5	81
133	Experimental study of atomic 4dgiant resonances by photoabsorption and photoelectron spectroscopy: Ba, La, and Ce. Physical Review A, 1989, 39, 5666-5675.	2.5	89
134	Resonance Auger spectra of free Rb atoms. Physical Review A, 1988, 38, 3395-3399.	2.5	13
135	Solid-state binding, recombination, and Auger energy shifts of rare-earth metals. Physical Review B, 1988, 38, 1763-1772.	3.2	25
136	Decay channels of the 4p resonances in atomic Sr. Journal of Physics B: Atomic, Molecular and Optical Physics, 1988, 21, 945-953.	1.5	17
137	Resonant Vacuum-Ultraviolet Photoelectron Spectra of Aligned Li Atoms. Physical Review Letters, 1987, 59, 2963-2966.	7.8	63
138	Electron heated high temperature atomic beam source for VUV photoelectron spectroscopy. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 1987, 254, 627-629.	1.6	14
139	PARTIAL AND TOTAL PHOTOIONIZATION CROSS SECTIONS OF ATOMIC Ba, La AND Ce IN THE RANGE OF THE GIANT 4d RESONANCES. Journal De Physique Colloque, 1987, 48, C9-539-C9-542.	0.2	2
140	PHOTOELECTRON SPECTROSCOPY OF ATOMIC Ca IN THE 2p-EXCITATION RANGE. Journal De Physique Colloque, 1987, 48, C9-543-C9-546.	0.2	1
141	PHOTOELECTRON SPECTROSCOPY OF LASER EXCITED Ca ATOMS. Journal De Physique Colloque, 1987, 48, C9-547-C9-550.	0.2	1
142	PHOTOELECTRON SPECTROSCOPY OF ORIENTED AND ALIGNED ALKALI ATOMS. Journal De Physique Colloque, 1987, 48, C9-551-C9-554.	0.2	0
143	Decay channels of core excitation resonances in 3d and 4f metal atoms. Zeitschrift FÃ1⁄4r Physik D-Atoms Molecules and Clusters, 1986, 2, 347-362.	1.0	80
144	Decay of the giant 4d photoabsorption resonance in atomic Cs and Sm. Journal of Physics B: Atomic and Molecular Physics, 1986, 19, 1645-1656.	1.6	22

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145	VUV photoelectron spectroscopy of laser-excited atomic Ba. Journal of Physics B: Atomic and Molecular Physics, 1985, 18, L337-L341.	1.6	25

146 Saturation behaviour of PtSi-photodiodes under 157-nm laser irradiation. , 0, , .