

# Marcus Scheck

## List of Publications by Year in descending order

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Version: 2024-02-01

164  
papers

2,951  
citations

172457

29  
h-index

206112

48  
g-index

175  
all docs

175  
docs citations

175  
times ranked

1284  
citing authors



#	ARTICLE	IF	CITATIONS
19	Experimental study of lifetimes of excited states in the $K^{\pi} = 0^{\pi}$ octupole band and $\hat{I}^3$ -vibrational band in $^{228}\text{Th}$ . Journal of Physics: Conference Series, 2020, 1643, 012122.	0.4	0
20	Lifetimes and shape-coexisting states of $\text{Zr}99$ . Physical Review C, 2019, 100, .	2.9	10
21	$\hat{I}^{\pm}$ -decay spectroscopy of the $N=130$ isotones $\text{Ra}218$ and $\text{Th}220$ : Mitigation of $\hat{I}^{\pm}$ -particle energy summing with implanted nuclei. Physical Review C, 2019, 100, .	2.9	5
22	Electromagnetic properties of low-lying states in neutron-deficient Hg isotopes: Coulomb excitation of $^{182}\text{Hg}$ , $^{184}\text{Hg}$ , $^{186}\text{Hg}$ and $^{188}\text{Hg}$ . European Physical Journal A, 2019, 55, 1.	2.5	13
23	The concept of nuclear photon strength functions: A model-independent approach via $(\hat{I}^3\hat{\alpha}^1, \hat{I}^3\hat{\alpha}^2, \hat{I}^3\hat{\alpha}^3)$ reactions. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 2019, 788, 225-230.	4.1	30
24	Low-lying octupole isovector excitation in $\text{Nd}144$ . Physical Review C, 2019, 99, .	2.9	1
25	The observation of vibrating pear-shapes in radon nuclei. Nature Communications, 2019, 10, 2473.	12.8	32
26	Decay properties of the $\{3_{-1}^{-}\}$ level in $^{96}\text{Mo}$ . Journal of Physics G: Nuclear and Particle Physics, 2019, 46, 075101.	3.6	7
27	Shape coexistence in $^{94}\text{Zr}$ studied via Coulomb excitation. EPJ Web of Conferences, 2019, 223, 01038.	0.3	2
28	Lifetimes of the $41^{+}$ states of $\text{Po}206$ and $\text{Po}204$ : A study of the transition from noncollective seniority-like mode to collectivity. Physical Review C, 2019, 100, .	2.9	9
29	Coulomb excitation of pear-shaped nuclei. EPJ Web of Conferences, 2019, 223, 01007.	0.3	0
30	Application programmes at the Scottish Centre for the Application of Plasma-based Accelerators (SCAPA). , 2019, , .		4
31	A study on the transition between seniority-type and collective excitations in $^{204}\text{Po}$ and $^{206}\text{Po}$ . EPJ Web of Conferences, 2018, 194, 03002.	0.3	1
32	Study of photon strength functions via $(\hat{I}^3\hat{\alpha}^1, \hat{I}^3\hat{\alpha}^2, \hat{I}^3\hat{\alpha}^3)$ reactions at the $\hat{I}^3$ -setup. EPJ Web of Conferences, 2018, 178, 03006.	0.3	0
33	Lifetime measurement in neutron-rich $A\sim 100$ nuclei. EPJ Web of Conferences, 2018, 193, 05003.	0.3	0
34	Search for Isovector Valence-Shell Excitations in $^{140}\text{Nd}$ and $^{142}\text{Sm}$ via Coulomb excitation reactions of radioactive ion beams. EPJ Web of Conferences, 2018, 194, 03003.	0.3	1
35	Low collectivity of the first $2^{+}$ states of $^{212,210}\text{Po}$ . Journal of Physics: Conference Series, 2018, 1023, 012019.	0.4	0
36	Half-life of the $15/2^{+}$ -state of $^{135}\text{La}$ : A test of $E2$ -seniority relations. Physical Review C, 2017, 95, .	2.9	10

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37	Collectivity in $^{196,198}\text{Pb}$ isotopes probed in Coulomb-excitation experiments at REX-ISOLDE. Journal of Physics G: Nuclear and Particle Physics, 2017, 44, 064009.	3.6	3
38	Collective quadrupole behavior in $^{106}\text{Pd}$ . Physical Review C, 2017, 95, .	2.9	13
39	Shell evolution of stable $N = 50$ -56 Zr and Mo nuclei with respect to low-lying octupole excitations. European Physical Journal A, 2017, 53, 1.	2.5	18
40	Low collectivity of the $^{212}\text{Po}$ state of $^{212}\text{Po}$ . Physical Review C, 2017, 96, .	2.9	15
41	A revised $B(E2; 2^+ \rightarrow 0^+)$ value in the semi-magic nucleus $^{210}\text{Po}$ . European Physical Journal A, 2017, 53, 1.	2.5	16
42	Experimental study of the lifetime and phase transition in neutron-rich $^{98}\text{Zr}$ . Physical Review C, 2017, 96, .	2.9	38
43	Experimental study of the lifetime and phase transition in neutron-rich $^{98}\text{Zr}$ . Physical Review C, 2017, 96, .	2.9	38
44	Experimental study of the lifetime and phase transition in neutron-rich $^{98}\text{Zr}$ . Physical Review C, 2017, 96, .	7.8	25
45	Capture cross sections on unstable nuclei. EPJ Web of Conferences, 2017, 146, 01013.	0.3	3
46	EXILL: a high-efficiency, high-resolution setup for $\hat{3}$ -spectroscopy at an intense cold neutron beam facility. Journal of Instrumentation, 2017, 12, P11003-P11003.	1.2	39
47	$\beta$ Decay as a New Probe for the Low-energy E1 Strength. Acta Physica Polonica B, 2017, 48, 547.	0.8	1
48	Search for mixed-symmetry states in $^{212}\text{Po}$ . Journal of Physics: Conference Series, 2016, 724, 012023.	0.4	0
49	Search for mixed-symmetry states of nuclei in the vicinity of the double-magic nucleus $^{208}\text{Pb}$ . EPJ Web of Conferences, 2016, 107, 03004.	0.3	1
50	Identification of low-energy isovector octupole states in $^{144}\text{Nd}$ . Journal of Physics: Conference Series, 2016, 724, 012050.	0.4	0
51	Dipole response of the odd-proton nucleus $^{205}\text{Tl}$ up to the neutron-separation energy. Journal of Physics G: Nuclear and Particle Physics, 2016, 43, 115101.	3.6	6
52	Collective $2^+ \rightarrow 1^-$ excitations in $^{206}\text{Po}$ and $^{208,210}\text{Rn}$ . European Physical Journal A, 2016, 52, 1.	2.5	8
53	$E0$ transitions in $^{106}\text{Pd}$ : Implications for shape coexistence. European Physical Journal A, 2016, 52, 1.	2.5	11
54	Low-lying isovector $^{212}\text{Po}$ excitations of $^{212}\text{Po}$ . Physical Review C, 2016, 93, .	2.9	17

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55	Direct Evidence of Octupole Deformation in Neutron-Rich $^{144}\text{Ba}$ . Physical Review Letters, 2016, 116, 132501.	7.8	118
56	Investigating the Pygmy Dipole Resonance Using $^{140}\text{Ce}$ . Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 2016, 756, 72-76.	7.8	17
57	Identification of the $\pi^{-}1^{-}$ state in $^{218}\text{Ra}$ populated via $\alpha$ decay of $^{222}\text{Th}$ . Physical Review C, 2016, 94, .	2.9	5
58	The pygmy quadrupole resonance and neutron-skin modes in $^{124}\text{Sn}$ . Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 2016, 752, 102-107.	4.1	22
59	The decay pattern of the Pygmy Dipole Resonance of $^{140}\text{Ce}$ . Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 2016, 756, 72-76.	4.1	39
60	Investigation of the Photon Strength Function in $^{130}\text{Te}$ . Journal of Physics: Conference Series, 2016, 665, 012039.	0.4	0
61	Study of Octupole Collectivity in $^{146}\text{Nd}$ and $^{148}\text{Sm}$ Using the New Coulomb Excitation Set-up at ALTO. Acta Physica Polonica B, 2016, 47, 923.	0.8	1
62	Evolution of quadrupole collectivity in $^{80}\text{Zr}$ toward the $^{64}\text{Zr}$ gap: The $^{64}\text{Zr}$ gap.		

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73	Decay pattern of the Pygmy Dipole Resonance in 140Ce. EPJ Web of Conferences, 2015, 93, 01048.	0.3	0
74	Do nuclei go pear-shaped? Coulomb excitation of 220Rn and 224Ra at REX-ISOLDE (CERN). EPJ Web of Conferences, 2015, 93, 01038.	0.3	0
75	Separation of the $1^{\pm}$ parity doublet in 20Ne. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 2015, 741, 128-133.	2.9	36
76	Direct determination of ground-state transition widths of low-lying dipole states in 140 Ce with the self-absorption technique. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 2015, 744, 369-374.	4.1	24
77	Testing refined shell-model interactions in the sd shell: Coulomb excitation of Na26. Physical Review C, 2015, 91, .	2.9	6
78	Decay pattern of the Pygmy Dipole Resonance in 130Te. EPJ Web of Conferences, 2014, 66, 02055.	0.3	0
79	First results of the (n, $\hat{1}^3$ ) EXILL campaigns at the Institut Laue Langevin using EXOGAM and FATIMA. Journal of Physics: Conference Series, 2014, 533, 012026.	0.4	0
80	Photoexcitation of the Stable Tl Isotopes Below the Neutron Separation Energy. Acta Physica Polonica B, 2014, 45, 193.	0.8	4
81	Shape coexistence in neutron-deficient Hg isotopes studied via lifetime measurements in Coulomb excitation. Physical Review C, 2014, 89, .	2.9	36
82	Coulomb excitation of Na: Mapping the borders of the island of inversion. Physical Review C, 2014, 89, .	2.9	16
83	News on the Scissors Mode. Journal of Physics: Conference Series, 2014, 533, 012008.	0.4	0
84	Shape Coexistence in the Neutron-Deficient Even-Even Hg Isotopes Studied via Coulomb Excitation. Physical Review Letters, 2014, 112, 162701.	7.8	96
85	Quadrupole collectivity in neutron-rich Cd isotopes. EPJ Web of Conferences, 2014, 66, 02012.	0.3	0
86	Nuclear Structure Studies of $^{106}\text{Pd}$ and $^{106}\text{Cd}$ with the (n, $n\alpha$ ) Reaction. EPJ Web of Conferences, 2014, 66, 02085.	0.3	2
87	Determination of the $B(E3, 0^+ \rightarrow 3^+)$ -excitation strength in octupole-correlated nuclei near $^{224}\text{Ac}$ by the means of Coulomb excitation at REX-ISOLDE. Journal of Physics: Conference Series, 2014, 533, 012007.	0.4	2
88	Constraining nuclear photon strength functions by the decay properties of photo-excited states. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 2013, 727, 361-365.	4.1	42
89	Matrix Elements from a Novel Decay Channel of the Scissors Mode: The Case of $^{60}\text{Co}$ . Physical Review Letters, 2015, 114, 172501.	7.8	23
90	Photoresponse of $^{60}\text{Co}$ below 10-MeV excitation energy: Evolution of dipole resonances in shell nuclei near $^{60}\text{Co}$ . Physical Review Letters, 2015, 114, 172501.	2.9	27

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91	The high-efficiency spectroscopy setup at. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2013, 723, 136-142.	1.6	48
92	A new differentially pumped plunger device to measure excited-state lifetimes in proton emitting nuclei. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2013, 707, 143-148.	1.6	27
93	Study of the pygmy dipole resonance in $^{94}\text{Mo}$ using the coincidence technique. Nuclear Physics A, 2013, 906, 94-107.	1.5	22
94	Shape dynamics in neutron-rich Kr isotopes: Coulomb excitation of $^{92}\text{Kr}$ , $^{94}\text{Kr}$ and $^{96}\text{Kr}$ . Nuclear Physics A, 2013, 899, 1-28.	1.5	40
95	Studies of pear-shaped nuclei using accelerated radioactive beams. Nature, 2013, 497, 199-204.	27.8	268
96	Decay pattern of the pygmy dipole resonance in $^{60}\text{Ni}$ . Physical Review C, 2013, 87, .	2.9	47
97	The Miniball spectrometer. European Physical Journal A, 2013, 49, 1.	2.5	126
98	Low-lying dipole strength in the $N=28$ shell-closure nucleus $^{52}\text{Cr}$ . Physical Review C, 2013, 88, .	2.9	16
99	Local suppression of collectivity in the $N=80$ isotones at the $Z=58$ subshell closure. Physical Review C, 2013, 88, .	2.9	14
100	Coulomb excitation of $^{107}\text{In}$ . Physical Review C, 2013, 87, .	2.9	5
101	Low-lying dipole strength of the open-shell nucleus $^{94}\text{Mo}$ . Physical Review C, 2013, 88, .	2.9	37
102	Transition probability studies in $^{175}\text{Au}$ . Journal of Physics: Conference Series, 2013, 420, 012047.	0.4	2
103	Coulomb excitation of re-accelerated $^{208}\text{Rn}$ and $^{206}\text{Po}$ beams. EPJ Web of Conferences, 2013, 63, 01009.	0.3	5
104	STUDY OF THE PYGMY DIPOLE RESONANCE WITH HADRONIC AND ELECTROMAGNETIC PROBES. , 2013, , .		0
105	A NEW PLUNGER DEVICE FOR INVESTIGATING THE EFFECTS OF DEFORMATION ON PROTON EMISSION RATES VIA LIFETIME MEASUREMENTS. , 2013, , .		0
106	Energy separation of the $1^+ / 1^{\pi}$ parity doublet in $^{20}\text{Ne}$ . Journal of Physics: Conference Series, 2012, 366, 012003.	0.4	0
107	Excitation strengths in $^{109}\text{Sn}$ : Single-neutron and collective excitations near $^{100}\text{Sn}$ . Physical Review C, 2012, 86, .	2.9	14
108	On the origin of low-lying $M1$ strength in even-even nuclei. Journal of Physics: Conference Series, 2012, 381, 012047.	0.4	1



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109	Progress on the study of nuclear states with mixed proton-neutron symmetry. EPJ Web of Conferences, 2012, 38, 10001.	0.3	0
110	Photon scattering off $^{94}\text{Zr}$ and $^{96}\text{Zr}$ . Journal of Physics: Conference Series, 2012, 366, 012054.	0.4	0
111	A new plunger device to measure lifetimes of unbound states in tagged exotic nuclei. Journal of Physics: Conference Series, 2012, 381, 012123.	0.4	0
112	Experimental evidences for low-lying octupole isovector states. Journal of Physics: Conference Series, 2012, 366, 012040.	0.4	2
113	One-phonon isovector $2^+_{MS}$ state in the neutron rich nucleus $^{132}\text{Te}$ . Journal of Physics: Conference Series, 2012, 366, 012008.	0.4	0
114	Structure of the pygmy dipole resonance in $^{124}\text{Sn}$ . Physical Review C, 2012, 85, .	2.9	56
115	Coulomb excitation of $^{107}\text{Sn}$ . European Physical Journal A, 2012, 48, 1.	2.5	14
116	Evidence for a Smooth Onset of Deformation in the Neutron-Rich Kr Isotopes. Physical Review Letters, 2012, 108, 062701.	7.8	69
117	A novel decay channel of the $1^+$ scissors mode: coupling to the vibrational $\beta^2$ -excitation. EPJ Web of Conferences, 2012, 38, 10004.	0.3	0
118	One-phonon isovector $2^+_{MS}$ in the neutron-rich nucleus $^{132}\text{Te}$ . Physical Review C, 2011, 84, .	2.9	65
119	A new differential plunger to measure lifetimes of unbound states in tagged exotic nuclei. , 2011, , .		2
120	Lifetime measurements probing triple shape coexistence in $^{175}\text{Au}$ . Physical Review C, 2011, 84, .	2.9	9
121	Combined in-beam electron and $\beta$ -ray spectroscopy of $^{184}\text{Hg}$ . Physical Review C, 2010, 81, .	2.9	29
122	Splitting of the Pygmy Dipole Resonance. , 2011, , .		0
123	Strong $M1$ components in $3^+ \rightarrow 3^+$ transitions in nearly spherical nuclei: Evidence for isovector-octupole excitations. Physical Review C, 2010, 81, .	2.9	13
124	Lifetimes of odd-spin yrast states in $^{182}\text{Hg}$ . Physical Review C, 2010, 81, .	2.9	24
125	Isospin Character of the Pygmy Dipole Resonance in $^{124}\text{Sn}$ . Physical Review Letters, 2010, 105, 212503.	7.8	160
126	Lifetime Measurements and Coulomb Excitation of Light Hg Nuclei. , 2009, , .		4



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127	Low-lying Collective States in [ <sup>136</sup> Ba.], 2009, .		0
128	Transfer Reactions on Neutron-rich Nuclei at REX-ISOLDE. , 2009, .		4
129	Study of the Pygmy Dipole Resonance in [ <sup>124</sup> Sn] by means of the ( $\hat{1}\pm, \hat{1}\pm \hat{1}^3$ ) reaction. , 2009, . Electric quadrupole moments of the $2^+$ in $^{124}\text{Sn}$		2
130	Collectivity in $^{100}\text{Hg}$	2.9	38
131	Pauli blocking in the low-lying, low-spin states of $^{180}\text{Pt}$ and $^{180}\text{Os}$	2.9	46
132	Pauli blocking in the low-lying, low-spin states of $^{141}\text{Pr}$ . Physical Review C, 2009, 79	2.9	5
133	Experimental study of the low-lying structure of $^{94}\text{Zr}$ [Phys. Rev. C, 2009, 79]	2.9	0
134	$^{94}\text{Zr}$ with		

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145	Systematics of magnetic dipole strength in the stable even-mass Mo isotopes. Physical Review C, 2006, 73, .	2.9	44
146	Two-phonon $1^+_{\pi}$ state in Sn112 observed in resonant photon scattering. Physical Review C, 2006, 73, .	2.9	17
147	Low-lying E1, M1, and E2 strength distributions in Xe124, 126, 128, 129, 130, 131, 132, 134, 136: Systematic photon scattering experiments in the mass region of a nuclear shape or phase transition. Physical Review C, 2006, 73, .	2.9	64
148	One-phonon $2^+_{1,ms}$ + mixed-symmetry state of Sm148 observed in nuclear resonance fluorescence. Physical Review C, 2005, 71, .	2.9	15
149	Decay of $1^+$ States as a New Probe of the Structure of $0^+$ Shape Isomers. Physical Review Letters, 2005, 95, 062501.	7.8	29
150	Dipole excitations in Ru96. Physical Review C, 2005, 72, .	2.9	18
151	Low-lying dipole excitations in vibrational nuclei: The Cd isotopic chain studied in photon scattering experiments. Physical Review C, 2005, 72, .	2.9	39
152	Investigation of dipole excitations in Ce142 using resonant photon scattering. Physical Review C, 2004, 69, .	2.9	12
153	Low-lying dipole excitations in nuclei in the mass regions of the new dynamical symmetries. Physics of Atomic Nuclei, 2004, 67, 1682-1687.	0.4	1
154	Dipole strength distributions in the stable Ba isotopes Ba134-138: A study in the mass region of a nuclear shape transition. Physical Review C, 2004, 70, .	2.9	26
155	Photon scattering experiments off $^{176}\text{Hf}$ and the systematics of low-lying dipole modes in the stable even-even Hf isotopes $^{176,178,180}\text{Hf}$ . Physical Review C, 2003, 67, .	2.9	22
156	Dipole excitations in $^{108}\text{Cd}$ . Physical Review C, 2003, 67, .	2.9	18
157	THE SYSTEMATICS OF DIPOLE MODES IN THE EVEN-EVEN HF NUCLEI. , 2003, , .		0
158	Low-energy electromagnetic excitation strengths in $^{121}\text{Sb}$ and $^{123}\text{Sb}$ . Physical Review C, 2002, 65, .	2.9	15
159	Influence of the N=50 neutron core on dipole excitations in $^{87}\text{Rb}$ . Physical Review C, 2002, 65, .	2.9	17
160	Proton-neutron structure of the N=52 nucleus $^{92}\text{Zr}$ . Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 2002, 550, 140-146.	4.1	93
161	Low-lying dipole excitations in the stable Cd isotopes: A systematics. Physics of Atomic Nuclei, 2001, 64, 1141-1146.	0.4	2
162	Low-lying dipole excitations in the odd-proton, midshell nucleus $^{103}\text{Rh}$ . Physical Review C, 2001, 63, .	2.9	13

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163	Generating inversion on a nuclear transition - photopumping of $^{103}\text{Rh}$ . European Physical Journal Special Topics, 2001, 11, Pr2-271-Pr2-274.	0.2	0
164	Systematics of low-lying E1 and M1 excitations in heavy nuclei from photon scattering experiments. AIP Conference Proceedings, 2000, , .	0.4	0