

# Roelof Bijker

## List of Publications by Citations

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153  
papers

3,306  
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33  
h-index

54  
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188  
ext. papers

3,642  
ext. citations

2.3  
avg, IF

5.26  
L-index

#	Paper	IF	Citations
153	Algebraic Models of Hadron Structure. I. Nonstrange Baryons. <i>Annals of Physics</i> , <b>1994</b> , 236, 69-116	2.5	256
152	Description of the Pt and Os isotopes in the interacting boson model. <i>Nuclear Physics A</i> , <b>1980</b> , 344, 207-233	2.5	146
151	Evidence for triangular D3h symmetry in <sup>12</sup> C. <i>Physical Review Letters</i> , <b>2014</b> , 113, 012502	7.4	143
150	<b>2001</b> ,		135
149	Algebraic Models of Hadron Structure. <i>Annals of Physics</i> , <b>2000</b> , 284, 89-133	2.5	99
148	The NUMEN project: NUClear Matrix Elements for Neutrinoless double beta decay. <i>European Physical Journal A</i> , <b>2018</b> , 54, 1	2.5	92
147	On triaxial features in the neutron-proton IBA. <i>Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics</i> , <b>1982</b> , 116, 77-81	4.2	86
146	Evidence for tetrahedral symmetry in ( <sup>16</sup> O). <i>Physical Review Letters</i> , <b>2014</b> , 112, 152501	7.4	82
145	The Algebraic Cluster Model: Three-Body Clusters. <i>Annals of Physics</i> , <b>2002</b> , 298, 334-360	2.5	78
144	Cluster states in nuclei as representations of a U(3) group. <i>Physical Review C</i> , <b>2000</b> , 61,	2.7	78
143	New class of supersymmetry in nuclei. <i>Physical Review C</i> , <b>1983</b> , 27, 1761-1764	2.7	78
142	Band structure from random interactions. <i>Physical Review Letters</i> , <b>2000</b> , 84, 420-2	7.4	74
141	Reanalysis of the nucleon spacelike and timelike electromagnetic form factors in a two-component model. <i>Physical Review C</i> , <b>2004</b> , 69,	2.7	72
140	A General Algebraic Model for Molecular Vibrational Spectroscopy. <i>Annals of Physics</i> , <b>1996</b> , 252, 211-238	2.5	72
139	Test of X(5) for the 5 degree of freedom. <i>Physical Review C</i> , <b>2003</b> , 68,	2.7	63
138	B(E2) upward arrow measurements for radioactive neutron-rich ge isotopes: reaching the N=50 closed shell. <i>Physical Review Letters</i> , <b>2005</b> , 94, 122501	7.4	62
137	Unquenched quark model for baryons: Magnetic moments, spins, and orbital angular momenta. <i>Physical Review C</i> , <b>2009</b> , 80,	2.7	58

136	Dominance of $JP=0^+$ ground states in even-even nuclei from random two-body interactions. <i>Physical Review C</i> , <b>1999</b> , 60,	2.7	55
135	Flavor asymmetry of sea quarks in the unquenched quark model. <i>Physical Review C</i> , <b>2010</b> , 82,	2.7	49
134	Interacting Boson-Fermion model of collective states IV. The $SU(3) \rightarrow U(2)$ limit. <i>Annals of Physics</i> , <b>1988</b> , 187, 148-197	2.5	49
133	Interacting Boson-Fermion model of collective states III. The $SO(6) \rightarrow U(2)$ limit. <i>Annals of Physics</i> , <b>1985</b> , 161, 360-398	2.5	46
132	ss-sea pair contribution to electromagnetic observables of the proton in the unquenched quark model. <i>Physical Review C</i> , <b>2012</b> , 85,	2.7	45
131	Description of odd-A nuclei in the Pt region in the interacting boson-fermion model. <i>Nuclear Physics A</i> , <b>1982</b> , 379, 221-238	1.3	45
130	Strong decays of nonstrange $q_3$ baryons. <i>Physical Review D</i> , <b>1997</b> , 55, 2862-2873	4.9	43
129	Description of the odd-even xenon and cesium isotopes in the proton-neutron interacting boson-fermion model. <i>Nuclear Physics A</i> , <b>1985</b> , 445, 333-349	1.3	43
128	Collective states in nuclei and many-body random interactions. <i>Physical Review C</i> , <b>2000</b> , 62,	2.7	42
127	Electromagnetic form factors in a collective model of the nucleon. <i>Physical Review C</i> , <b>1996</b> , 54, 1935-1953.	2.7	41
126	A calculation of low-lying collective states in odd-even nuclei. <i>Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics</i> , <b>1984</b> , 144, 141-144	4.2	40
125	Interacting boson-fermion model of collective states II. Boson-fermion symmetries connected with the $U(5)$ limit. <i>Annals of Physics</i> , <b>1984</b> , 156, 110-141	2.5	39
124	Algebraic-eikonal approach to electron-molecule scattering: Diatomic molecules. <i>Physical Review A</i> , <b>1986</b> , 33, 871-881	2.6	38
123	The algebraic cluster model: Structure of $^{16}\text{O}$ . <i>Nuclear Physics A</i> , <b>2017</b> , 957, 154-176	1.3	36
122	Symmetry-Adapted Algebraic Description of Stretching and Bending Vibrations of Ozone. <i>Journal of Molecular Spectroscopy</i> , <b>1997</b> , 184, 1-11	1.3	36
121	Spectroscopy of pentaquark states. <i>European Physical Journal A</i> , <b>2004</b> , 22, 319-329	2.5	34
120	Spectrum-generating algebra for $X_3$ molecules. <i>Physical Review A</i> , <b>1995</b> , 52, 2786-2790	2.6	33
119	Further tests of the multi-j supersymmetry scheme using transfer reactions. <i>Physical Review C</i> , <b>1983</b> , 28, 360-363	2.7	32

118	Algebraic-eikonal approach to electron-molecule scattering. II. Rotational and vibrational excitation of LiF and KI. <i>Physical Review A</i> , <b>1986</b> , 34, 71-79	2.6	30
117	Mean-field analysis of interacting boson models with random interactions. <i>Physical Review C</i> , <b>2001</b> , 64,	2.7	29
116	Supersymmetric quantum mechanics and superdeformed nuclei. <i>Physical Review Letters</i> , <b>1991</b> , 67, 2777-2779		28
115	Properties of the intrinsic matrix elements of the interacting-boson-approximation E2 operator in the rotational limit. <i>Physical Review C</i> , <b>1982</b> , 26, 2688-2689	2.7	27
114	Quark-antiquark effects in baryons. <i>Few-Body Systems</i> , <b>2008</b> , 44, 95-97	1.6	25
113	Algebraic treatment of the hyper-Coulomb problem. <i>Journal of Physics A</i> , <b>1998</b> , 31, 9041-9054		25
112	Rotational bands in $^{152}\text{Sm}$ observed following the $(\alpha, 2n)$ reaction. <i>Nuclear Physics A</i> , <b>1982</b> , 373, 397-433	1.3	25
111	Strong decays of baryons and missing resonances. <i>Physical Review D</i> , <b>2016</b> , 94,	4.9	24
110	Study of the $^{193}\text{Ir}(3\text{He}, d)^{194}\text{Pt}$ and $^{193}\text{Ir}(d, 3\text{He})^{192}\text{Os}$ reactions: Test of a supersymmetric coupling scheme. <i>Nuclear Physics A</i> , <b>1982</b> , 388, 77-92	1.3	24
109	On the relation between algebraic and configuration space calculations of molecular vibrations. <i>Chemical Physics Letters</i> , <b>1996</b> , 258, 301-306	2.5	23
108	Relation between the interacting boson-fermion approximation model and dynamical boson-fermion symmetries. <i>Physical Review C</i> , <b>1985</b> , 32, 591-601	2.7	23
107	Magnetic moments of antidecuplet pentaquarks. <i>Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics</i> , <b>2004</b> , 595, 260-268	4.2	22
106	Regular spectra in the vibron model with random interactions. <i>Physical Review C</i> , <b>2002</b> , 65,	2.7	22
105	Single-particle levels in cluster potentials. <i>Nuclear Physics A</i> , <b>2017</b> , 966, 158-184	1.3	20
104	Generic rotation in a collective SD nucleon-pair subspace. <i>Physical Review C</i> , <b>2002</b> , 66,	2.7	20
103	Algebraic description of the skyrmion and its quantization for finite N. <i>Physical Review Letters</i> , <b>1987</b> , 58, 654-657	7.4	20
102	Study of $^{96, 98, 100}\text{Mo}$ with the $\text{Ru}(d, 6\text{Li}) \text{Mo}$ reaction at $E_d = 45 \text{ MeV}$ . <i>Nuclear Physics A</i> , <b>1984</b> , 422, 61-80		19
101	$U(5) \times SU(2)$ limits of the interacting boson fermion model, their associated supersymmetries, and their application to $^{76}\text{Se}$ and $^{75}\text{As}$ . <i>Physical Review C</i> , <b>1985</b> , 32, 1406-1415	2.7	18

100	Two-component model for the axial form factor of the nucleon. <i>Physical Review C</i> , <b>2008</b> , 78,	2.7	16
99	Strange form factors of the proton in a two-component model. <i>Journal of Physics G: Nuclear and Particle Physics</i> , <b>2006</b> , 32, L49-L57	2.9	16
98	Low-spin E <sub>γ</sub> spectroscopy of the (critical-point?) nucleus Ba122. <i>Physical Review C</i> , <b>2004</b> , 69,	2.7	16
97	Excitation of hexadecapole transitions in <sup>196</sup> Pt via electron scattering and their interpretation in the interacting boson approximation. <i>Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics</i> , <b>1985</b> , 152, 330-334	4.2	16
96	Algebraic Treatment of Collective Excitations in Baryon Spectroscopy <b>1994</b> , 87-101		16
95	Algebraic cluster model with tetrahedral symmetry <b>2010</b> ,		15
94	On the Elimination of Spurious Modes in Algebraic Models of Molecular Vibrations. <i>Journal of Molecular Spectroscopy</i> , <b>1999</b> , 196, 329-334	1.3	15
93	Algebraic-eikonal approach to electron-molecule scattering. III. Triatomic molecules. <i>Physical Review A</i> , <b>1988</b> , 37, 1425-1437	2.6	15
92	Transformation brackets between U(6) ⊗ U(6) ⊗ SO(6) and U(6) ⊗ SO(6) ⊗ SO(6). <i>Journal of Mathematical Physics</i> , <b>1996</b> , 37, 2674-2681	1.2	14
91	Self-energies of octet and decuplet baryons due to the coupling to the baryon-meson continuum. <i>European Physical Journal A</i> , <b>2017</b> , 53, 1	2.5	13
90	Boson expansions for systems of interacting bosons. <i>Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics</i> , <b>1989</b> , 219, 5-9	4.2	13
89	Hidden charm pentaquarks: mass spectrum, magnetic moments and photocouplings. <i>Journal of Physics G: Nuclear and Particle Physics</i> , <b>2019</b> , 46, 065104	2.9	12
88	Spectrum generating algebras for few-body systems. <i>Journal of Physics: Conference Series</i> , <b>2012</b> , 380, 012003	0.3	12
87	Two-nucleon transfer reactions uphold supersymmetry in atomic nuclei. <i>Physical Review Letters</i> , <b>2005</b> , 94, 152501	7.4	12
86	Comment on "Two-Body Random Ensembles: From Nuclear Spectra to Random Polynomials"	7.4	12
85	Excitation energy of the collective M1 mode in the classical limit of the neutron-proton interacting boson model. <i>Physical Review C</i> , <b>1985</b> , 32, 1442-1444	2.7	12
84	Electroproduction of baryon-meson states and strangeness suppression. <i>Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics</i> , <b>2016</b> , 759, 214-217	4.2	12
83	The (varOmega_{c})-puzzle solved by means of quark model predictions. <i>European Physical Journal C</i> , <b>2019</b> , 79, 1	4.2	12

82	Cluster structure of light nuclei. <i>Progress in Particle and Nuclear Physics</i> , <b>2020</b> , 110, 103735	10.6	11
81	Algebraic Treatment of Three-Body Problems. <i>Few-Body Systems</i> , <b>1998</b> , 25, 89-100	1.6	10
80	Sensitivity of tensor analyzing power in the process $d+p \rightarrow d+n$ to the longitudinal isoscalar form factor of the Roper resonance electroexcitation. <i>Physical Review C</i> , <b>1999</b> , 59, 1526-1533	2.7	10
79	Algebraic approach to the two-Skyrmion system. <i>Physical Review C</i> , <b>1987</b> , 36, 1727-1736	2.7	10
78	Breaking of the multi-j supersymmetry schemes in the Pt195(d,p)Pt196 reaction. <i>Physical Review C</i> , <b>1984</b> , 30, 517-520	2.7	10
77	Evidence for Triangular $D_{3h}^{\{ \}}$ Symmetry in $^{13}\text{C}$ . <i>Physical Review Letters</i> , <b>2019</b> , 122, 162501	7.4	9
76	Transfer and neutron capture reactions to Ir194 as a test of $U(6/12)?U(6/4)$ supersymmetry. <i>Physical Review C</i> , <b>2008</b> , 77,	2.7	9
75	Single-particle transfer and nuclear supersymmetry. <i>Physical Review C</i> , <b>2001</b> , 64,	2.7	9
74	Geometrical symmetries of nuclear systems: $\mathcal{D}_{3h}$ and $\mathcal{T}_d$ symmetries in light nuclei. <i>Physica Scripta</i> , <b>2016</b> , 91, 073005	2.6	9
73	On prolate shape predominance in nuclear deformation. <i>Journal of Physics: Conference Series</i> , <b>2011</b> , 322, 012018	0.3	8
72	A new look at nuclear supersymmetry through transfer experiments. <i>Journal of Physics A</i> , <b>2004</b> , 37, 10251-10260		
71	Spin-rotor interpretation of identical bands and quantized alignment in superdeformed A. <i>Physical Review C</i> , <b>1995</b> , 52, 1307-1314	2.7	8
70	Hybrid approach to electron scattering from polar molecules. <i>Physical Review A</i> , <b>1990</b> , 42, 6414-6422	2.6	8
69	Unquenching the Quark Model. <i>Few-Body Systems</i> , <b>2011</b> , 50, 199-201	1.6	7
68	Dynamic symmetries in deformed odd-even nuclei. <i>Physical Review C</i> , <b>1988</b> , 37, 2149-2155	2.7	6
67	Comment on Boson-realization model for the vibrational spectra of tetrahedral molecules□ <i>Physical Review A</i> , <b>1997</b> , 56, 4337-4340	2.6	5
66	Playing Dice with Nuclei: Pattern out of Randomness?. <i>Nuclear Physics News</i> , <b>2001</b> , 11, 15-20	0.7	5
65	Vibrational excitation of molecules in electron scattering. <i>Physical Review A</i> , <b>1992</b> , 46, 1388-1393	2.6	5

64	Eikonal scattering from complex systems. <i>Physical Review C</i> , <b>1992</b> , 45, 3030-3033	2.7	5
63	An Unquenched Quark Model of Baryons. <i>AIP Conference Proceedings</i> , <b>2007</b> ,	0	4
62	Form factors in the algebraic cluster model. <i>Physica Scripta</i> , <b>2015</b> , 90, 074006	2.6	3
61	Open Flavor Strong Decays. <i>Few-Body Systems</i> , <b>2016</b> , 57, 985-991	1.6	3
60	Electromagnetic transitions in the algebraic cluster model. <i>Physica Scripta</i> , <b>2017</b> , 92, 124001	2.6	3
59	New supersymmetric quartet of nuclei in the A~190 mass region. <i>Physical Review C</i> , <b>2009</b> , 79,	2.7	3
58	Spin and flavor content of octet baryons. <i>Journal of Physics: Conference Series</i> , <b>2011</b> , 322, 012014	0.3	2
57	Supersymmetry in nuclear physics. <i>Journal of Physics: Conference Series</i> , <b>2010</b> , 237, 012005	0.3	2
56	Eigenvalue correlations and the distribution of ground state angular momenta for random many-body quantum systems. <i>Physical Review C</i> , <b>2009</b> , 79,	2.7	2
55	A Geometric and an Algebraic Model for Tri-Nuclear Molecules. <i>Acta Physica Hungarica A Heavy Ion Physics</i> , <b>2001</b> , 13, 89-92		2
54	Pentaquark states with hidden charm. <i>Journal of Physics: Conference Series</i> , <b>2017</b> , 876, 012004	0.3	1
53	The nuclear matrix elements of $0\nu\beta\beta$ decay and the NUMEN project at INFN-LNS. <i>Journal of Physics: Conference Series</i> , <b>2016</b> , 730, 012006	0.3	1
52	Odd-mass nuclei in the cluster shell model. <i>Journal of Physics: Conference Series</i> , <b>2019</b> , 1308, 012005	0.3	1
51	The NUMEN project @ LNS: Status and perspectives <b>2019</b> ,		1
50	Discrete and continuous symmetries in cluster nuclei. <i>Journal of Physics: Conference Series</i> , <b>2014</b> , 512, 012007	0.3	1
49	The Rotation-Vibration Structure of $^{12}\text{C}$ . <i>Journal of Physics: Conference Series</i> , <b>2014</b> , 569, 012011	0.3	1
48	Recent Results for the Unquenched Quark Model. <i>Few-Body Systems</i> , <b>2013</b> , 54, 761-767	1.6	1
47	The NUMEN project @ LNS: Status and perspectives <b>2017</b> ,		1

46	The unquenched quark model. <i>Journal of Physics: Conference Series</i> , <b>2015</b> , 639, 012013	0.3	1
45	Valence and sea quarks in the nucleon. <i>Journal of Physics: Conference Series</i> , <b>2015</b> , 578, 012015	0.3	1
44	The structure of rotational bands in alpha-cluster nuclei. <i>EPJ Web of Conferences</i> , <b>2015</b> , 93, 01011	0.3	1
43	Structure of the nucleon in the unquenched quark model. <i>Journal of Physics: Conference Series</i> , <b>2010</b> , 239, 012009	0.3	1
42	Transition from the seniority to the anharmonic vibrator regime in nuclei. <i>Physical Review C</i> , <b>1997</b> , 55, R585-R587	2.7	1
41	Algebraic Model of an Oblate Top <b>1997</b> , 9-24		1
40	Spectrum generating algebra of the symmetric top. <i>Nuclear Physics A</i> , <b>1998</b> , 631, 727-731	1.3	1
39	Flavor content of nucleon form factors in the space- and time-like region. <i>Nuclear Physics A</i> , <b>2007</b> , 790, 136c-142c	1.3	1
38	Flavor content of nucleon form factors in a VMD approach. <i>European Physical Journal A</i> , <b>2007</b> , 32, 403-407.5	1.5	1
37	Algebraic-eikonal approach to medium energy proton scattering from odd-mass nuclei. <i>Physical Review C</i> , <b>1995</b> , 52, 831-836	2.7	1
36	Iterative boson expansions and mean-field approximations for boson systems. <i>Nuclear Physics A</i> , <b>1992</b> , 537, 13-44	1.3	1
35	Hadron Spectroscopy in the Unquenched Quark Model <b>2016</b> ,		1
34	A Comparison Between Algebraic Models of Molecular Spectroscopy <b>1998</b> , 37-46		1
33	An Introduction to Nuclear Supersymmetry: A Unification Scheme for Nuclei. <i>Lecture Notes in Physics</i> , 285-324	0.8	1
32	Algebraic Treatment of Multistep Processes in Electron-Molecule Scattering <b>1991</b> , 15-29		1
31	A Symmetry Adapted Algebraic Approach to Molecular Spectroscopy <b>1997</b> , 99-115		1
30	Discrete symmetries in the cluster shell model. <i>European Physical Journal: Special Topics</i> , <b>2020</b> , 229, 2353-2366	1.3	1
29	The nuclear matrix elements of $0\nu\beta\beta$ decay and the NUMEN project at INFN-LNS. <i>EPJ Web of Conferences</i> , <b>2016</b> , 117, 10003	0.3	1



28	Cluster structure of $^{20}\text{Ne}$ : Evidence for D3h symmetry. <i>Nuclear Physics A</i> , <b>2021</b> , 1006, 122077	1.3	1
27	Algebraic treatment of alpha-cluster nuclei. <i>Journal of Physics: Conference Series</i> , <b>2014</b> , 492, 012009	0.3	0
26	Regular spectra from random interactions. <i>European Physical Journal D</i> , <b>2002</b> , 52, C643-C648		0
25	Recent results on heavy-ion induced reactions of interest for neutrinoless double beta decay at INFN-LNS. <i>Journal of Physics: Conference Series</i> , <b>2020</b> , 1643, 012074	0.3	0
24	Cluster structure of $^{21}\text{Ne}$ and $^{21}\text{Na}$ . <i>Nuclear Physics A</i> , <b>2021</b> , 1010, 122193	1.3	0
23	Measuring nuclear reaction cross sections to extract information on neutrinoless double beta decay. <i>Journal of Physics: Conference Series</i> , <b>2018</b> , 966, 012021	0.3	0
22	Global Correlations for Low-Lying Collective $2+$ States. <i>Journal of Physics: Conference Series</i> , <b>2017</b> , 876, 012019	0.3	
21	Contribution of sea quarks to the electromagnetic decay of decuplet baryons. <i>Journal of Physics: Conference Series</i> , <b>2017</b> , 912, 012027	0.3	
20	Recent results on Heavy-Ion induced reactions of interest for $0^+$ decay. <i>Journal of Physics: Conference Series</i> , <b>2019</b> , 1308, 012002	0.3	
19	Electromagnetic couplings of pentaquarks. <i>Journal of Physics: Conference Series</i> , <b>2019</b> , 1308, 012015	0.3	
18	Geometric symmetries in light nuclei. <i>Journal of Physics: Conference Series</i> , <b>2017</b> , 863, 012009	0.3	
17	Correlations between transfer reactions in nuclear supersymmetry. <i>Journal of Physics: Conference Series</i> , <b>2011</b> , 284, 012013	0.3	
16	Configuration mixing in the quark model. <i>Journal of Physics: Conference Series</i> , <b>2012</b> , 403, 012039	0.3	
15	Strangeness of the proton. <i>Journal of Physics: Conference Series</i> , <b>2012</b> , 387, 012011	0.3	
14	A symmetry adapted approach to vibrational excitations in atomic clusters. <i>European Physical Journal D</i> , <b>1998</b> , 48, 782-788		
13	XXV symposium on nuclear physics. <i>Nuclear Physics News</i> , <b>2002</b> , 12, 14-14	0.7	
12	Mean-field approximations for deformed odd-mass nuclei. <i>Nuclear Physics A</i> , <b>1992</b> , 543, 469-494	1.3	
11	Electromagnetic form factors of the nucleon 81-90		

- 10 Prediction of sand wave migration with a non-linear spectral model **2007**, 977-983
- 9 Flavor asymmetry of the nucleon sea in an unquenched quark model **2008**, 166-168
- 8 Recent developments in the constituent quark model including quark-antiquark pairs **2008**, 35-39
- 7 Triangular symmetry in cluster nuclei. *Journal of Physics: Conference Series*, **2020**, 1643, 012113 0.3
- 6 Algebraic Approach to Baryon Structure **1997**, 193-210
- 5 Recent results on heavy-ion direct reactions of interest for  $0^+$  decay at INFN - LNS. *Journal of Physics: Conference Series*, **2020**, 1610, 012004 0.3
- 4 Strangeness suppression in the unquenched quark model. *Journal of Physics: Conference Series*, **2016**, 730, 012005 0.3
- 3 Recent results on heavy-ion induced reactions of interest for neutrinoless double beta decay at INFN-LNS. *EPJ Web of Conferences*, **2019**, 223, 01009 0.3
- 2 Splitting of single-particle levels in clusters potentials. *Journal of Physics: Conference Series*, **2018**, 1078, 012019 0.3
- 1 Electromagnetic and weak decays of baryons in the unquenched quark model. *Journal of Physics: Conference Series*, **2018**, 1078, 012005 0.3