Luiz Carlos Chamon

List of Publications by Year
in descending order

111 papers	3,959 citations	126907 33 h-index	123424 61 g-index
114 all docs	114 docs citations	114 times ranked	824 citing authors

#	Article	IF	Citations
1	Toward a global description of the nucleus-nucleus interaction. Physical Review C, 2002, 66, .	2.9	481
2	Nonlocal Description of the Nucleus-Nucleus Interaction. Physical Review Letters, 1997, 79, 5218-5221.	7.8	239
3	Dynamic effects of breakup on fusion reactions of weakly bound nuclei. Nuclear Physics A, 2009, 821, 51-71.	1.5	194
4	Disentangling static and dynamic effects of low breakup threshold in fusion reactions. Journal of Physics G: Nuclear and Particle Physics, 2009, 36, 015109.	3.6	157
5	Comprehensive study of reaction mechanisms for theBe9+Sm144system at near- and sub-barrier energies. Physical Review C, 2006, 73, .	2.9	144
6	A parameter-free optical potential for the heavy-ion elastic scattering process. Nuclear Physics A, 2003, 723, 93-103.	1.5	134
7	Nuclear fusion in dense matter: Reaction rate and carbon burning. Physical Review C, 2005, 72, .	2.9	128
8	New manifestation of the dispersion relation: Breakup threshold anomaly. Physical Review C, 2006, 73, .	2.9	128
9	Effect of the breakup on the fusion and elastic scattering of weakly bound projectiles onZn64. Physical Review C, 2005, 71, .	2.9	121
10	Fusion, reaction and break-up cross sections of weakly bound projectiles on 64Zn. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 2004, 601, 20-26.	4.1	110
11	Elastic scattering and total reaction cross section for the 6He + 27Al system. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 2007, 647, 30-35.	4.1	102
12	Pauli Nonlocality in Heavy-Ion Rainbow Scattering: A Further Test of the Folding Model. Physical Review Letters, 1997, 78, 3270-3273.	7.8	97
13	An imaginary potential with universal normalization for dissipative processes in heavy-ion reactions. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 2009, 670, 330-335.	4.1	75
14	Comparison between heavy-ion reaction and fusion processes for hundreds of systems. Nuclear Physics A, 2006, 764, 135-148.	1.5	72
15	Threshold anomaly with weakly bound projectiles: Elastic scattering ofBe9+Al27. Physical Review C, 2004, 70, .	2.9	70
16	Fusion, break-up and elastic scattering of weakly bound nuclei. Journal of Physics G: Nuclear and Particle Physics, 2005, 31, S1669-S1673.	3.6	68
17	Parameterfree account of quasielastic scattering of stable and radioactive nuclei. Physical Review C, 1998, 58, 576-578.	2.9	64
18	Global and consistent analysis of the heavy-ion elastic scattering and fusion processes. Physical Review C, 2004, 69, .	2.9	63

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19	Reaction functions for weakly bound systems. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 2009, 678, 77-81.	4.1	54
20	Disentangling the reaction mechanisms of weakly bound nuclei. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 2006, 634, 356-361.	4.1	53
21	Experimental determination of the surface density for the6Heexotic nucleus. Physical Review C, 2003, 67, .	2.9	52
22	Pair transfer and the sub-barrier fusion ofO18+58Ni. Physical Review C, 1992, 46, 2360-2363.	2.9	51
23	Reliable potential for studying fusion of weakly bound nuclei. Physical Review C, 2005, 72, .	2.9	51
24	The heavy-ion nuclear potential: determination of a systematic behavior at the region of surface interaction distances. Nuclear Physics A, 2001, 679, 287-303.	1.5	48
25	Experimental determination of the ion-ion potential in the N = 50 target region: A tool to probe ground-state nuclear densities. Nuclear Physics A, 1999, 656, 187-208.	1.5	46
26	Nuclear rainbow in the 16O+27AL system: The role of couplings at energies far above the barrier. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 2012, 710, 426-429.	4.1	46
27	Consistent analysis of peripheral reaction channels and fusion for the 16,18O+58Ni systems. Nuclear Physics A, 2005, 748, 59-74.	1.5	45
28	The SÃ£o Paulo Potential. Nuclear Physics A, 2007, 787, 198-205.	1.5	42
29	Elongated shape isomers in the<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mmultiscripts><mml:mi mathvariant="normal">Ar</mml:mi><mml:mprescripts /><mml:none /><mml:mrow><mml:mn>36</mml:mn></mml:mrow></mml:mmultiscripts></mml:math>nucleus. Physical Review C, 2009, 80, .	2.9	41
30	Breakup coupling effects on near-barrier quasi-elastic scattering ofLi6,7onSm144. Physical Review C, 2009, 80, .	2.9	40
31	Appropriate bare potentials for studying fusion induced byHe6. Physical Review C, 2007, 75, .	2.9	39
32	Isotopic dependence of the ion-ion potential in the systems 16O+58,60,62,64Ni. Nuclear Physics A, 1996, 597, 253-268.	1.5	38
33	SÃ£o Paulo potential version 2 (SPP2) and Brazilian nuclear potential (BNP). Computer Physics Communications, 2021, 267, 108061.	7.5	37
34	Study of the rainbow-like pattern in the elastic scattering of¹⁶O on²⁷Al atE_{lab.}= 100 MeV. Journal of Physics G: Nuclear and Particle Physics, 2013, 40, 105101.	3.6	35
35	Effect of the 18O nuclear density on the nuclear potentials of the 18O+58,60Ni systems. Nuclear Physics A, 2002, 707, 325-342.	1.5	34
36	Astrophysical S factors for fusion reactions involving C, O, Ne, and Mg isotopes. Atomic Data and Nuclear Data Tables, 2010, 96, 541-566.	2.4	34

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37	Fusion of hyperdeformed band in<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mmultiscripts><mml:mi mathvariant="normal">Ar</mml:mi><mml:mprescripts /><mml:none /><mml:mrow><mml:mn>36</mml:mn></mml:mrow></mml:mmultiscripts></mml:math>observed in<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mmultiscripts><mml:mi mathvariant="normal">C</mml:mi><mml:mprescripts />	2.9	32
38	Fusion and peripheral processes in the16,18O+58,60,64Nisystems. Physical Review C, 1997, 55, 3155-3158.	2.9	31
39	Coulomb and nuclear potentials between deformed nuclei. Physical Review C, 2004, 70, .	2.9	31
40	Determination of the12Cnuclear density through heavy-ion elastic scattering experiments. Physical Review C, 2002, 65, .	2.9	30
41	Elastic, inelastic and <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mrow><mml:mn>1</mml:mn><mml:mi>n</mml:mi></mml:mrow></mml:math> transfer cross sections for the <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mrow><mml:mmultiscripts><mml:mi mathvariant="normal">B</mml:mi><mml:mprescripts /><mml:none /><mml:mn>10</mml:mn></mml:mmultiscripts><mml:mo>+</mml:mo><mml:mmultiscripts><mml:mi mat	2.9	27
42	Coulomb excitation of11Bereexamined. Physical Review C, 2003, 67, .	2.9	25
43	Probing the 6,7Li nucleon densities through a new break-up process approach. Nuclear Physics A, 2010, 836, 1-10.	1.5	23
44	Elastic scattering, inelastic excitation, and neutron transfer for Li7+Sn120 at energies around the Coulomb barrier. Physical Review C, 2017, 95, .	2.9	23
45	On the near-barrier fusion of the proton-halo 8B + 58Ni system. European Physical Journal A, 2013, 49, 1.	2.5	22
46	Systematical study of the optical potential for systems likeA+58Nifrom sub-barrier data analyses. Physical Review C, 2003, 67, .	2.9	21
47	Reaction dynamics of theO18+Ni58system: A wide-ranging test. Physical Review C, 2006, 73, .	2.9	20
48	Consistent analysis of fusion data without adjustable parameters for a wide variety of heavy-ion systems. Physical Review C, 2007, 75, .	2.9	19
49	Effect of the threshold anomallyon the fusion cross sections for the systems 16O+ 63,65Cu. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 1989, 220, 347-350.	4.1	18
50	Precise nuclear matter densities from heavy-ion collisions. Physical Review C, 2001, 65, .	2.9	18
51	Study of the effects of Pauli blocking and Pauli nonlocality on the optical potential. Nuclear Physics A, 2005, 753, 83-93.	1.5	17
52	Isotopic dependence of the fusion cross section in the systems 16,18O + 63,65Cu. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 1992, 275, 29-32.	4.1	16
53	Systematics of nuclear densities, deformations and excitation energies within the context of the generalized rotationâ€“vibration model. Nuclear Physics A, 2010, 846, 1-30.	1.5	16
54	Elastic scattering, inelastic excitation, and <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mrow><mml:mn>1</mml:mn><mml:mi>n</mml:mi></mml:mrow></mml:math> pick-up transfer cross sections for <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mmultiscripts><mml:mi mathvariant="normal">B</mml:mi><mml:mprescripts /><mml:none /><mml:mn>10</mml:mn></mml:mmultiscripts></mml:math> + <mml:math xmlns:mml="http://www.w3.o	2.9	16

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55	Accurate approximation for the Coulomb potential between deformed nuclei. Physical Review C, 2004, 70, .	2.9	15
56	Experimental investigation of the ion-ion potential for the system at large interaction distances. Nuclear Physics A, 1995, 582, 305-313.	1.5	14
57	Systematic study of optical potential strengths in reactions on <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mmultiscripts><mml:mi>Sn</mml:mi><mml:mprescripts /><mml:none /><mml:mn>120</mml:mn></mml:mmultiscripts></mml:math> involving strongly bound, weakly bound, and exotic nuclei. Physical Review C, 2019, 100, .	2.9	14
58	O18+Pd110: Measurements and realistic coupled-channel analysis in a transitional region. Physical Review C, 2006, 74, .	2.9	12
59	Investigation of the fusion process for <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mrow><mml:mmultiscripts><mml:mi mathvariant="normal">B</mml:mi><mml:mprescripts /><mml:none /><mml:mn>10</mml:mn></mml:mmultiscripts><mml:mo>+</mml:mo><mml:mmultiscripts><mml:mi>Au</mml:mi><mml:mprescripts /><mml:none /><mml:mn>197</mml:mn></mml:mmultiscripts></mml:mrow></mml:math> at near-barrier energies. Physical Review C, 2020, 101, .	2.9	12
60	Elastic, inelastic scatterings and transfer reactions for 16,18O on 58Ni described by the SÃ£o Paulo potential. Brazilian Journal of Physics, 2005, 35, 909-911.	1.4	10
61	Limitation of double folding potentials to simulate the polarization in reactions involving halo nuclei. Nuclear Physics A, 2008, 806, 146-155.	1.5	10
62	Breakup Coupling Effects on Fusion of Weakly Bound Nuclei. Nuclear Physics A, 2010, 834, 151c-154c.	1.5	10
63	<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:mi>Î±</mml:mi><mml:mo>+</mml:mo><mml:mi>Î±</mml:mi></mml:mrow></mml:math> scattering reexamined in the context of the SÃ£o Paulo potential. Physical Review C, 2011, 83, .	2.9	10
64	Approximate treatment of relativistic effects in the low-energyÎ±+Î±scattering. Physical Review C, 2011, 84, .	2.9	10
65	Effect of the inelastic couplings on the scattering of alpha particles by 12C at low energies. Journal of Physics G: Nuclear and Particle Physics, 2014, 41, 035101.	3.6	10
66	Investigation of the reaction mechanisms for <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mmultiscripts><mml:mi mathvariant="normal">B</mml:mi><mml:mprescripts /><mml:none /><mml:mn>10</mml:mn></mml:mmultiscripts><mml:mspace width="4pt" /><mml:mo>+</mml:mo><mml:mspace width="4pt" /><mml:mmultiscripts><mml:mi mathvariant="normal">Au</mml:mi><mml:mprescripts /><mml:none /><mml:mn>197</mml:mn></mml:m	2.9	10
67	Understanding fusion suppression and enhancement in the 18O + 58,60,64Ni systems. Nuclear Physics A, 2009, 826, 211-222.	1.5	9
68	Investigation of Coulomb dipole polarization effects on reactions involving exotic nuclei. Physical Review C, 2015, 92, .	2.9	9
69	Measurement of fusion cross sections for ¹⁶O+¹⁶O. Journal of Physics G: Nuclear and Particle Physics, 2015, 42, 065102.	3.6	9
70	Second order effects in the algebraic potential for heavy-ion systems near the Coulomb barrier. Physical Review C, 1994, 50, 3033-3036.	2.9	8
71	Consistent analysis of fusion data without adjustable parameters for systems involving odd nuclei. Physical Review C, 2007, 76, .	2.9	8
72	Evidence of a slight nuclear transparency in the alpha-nucleus systems. Journal of Physics G: Nuclear and Particle Physics, 2015, 42, 055102.	3.6	8

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73	A method to optimize mass discrimination of particles identified in $$Delta E$$â€“E silicon surface barrier detector systems. European Physical Journal A, 2020, 56, 1.	2.5	8
74	Understanding the mechanisms of nuclear collisions: A complete study of the <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mrow><mml:mmultiscripts><mml:mi mathvariant="normal">B</mml:mi><mml:mprescripts /><mml:none /><mml:mn>10</mml:mn></mml:mmultiscripts><mml:mo>+</mml:mo><mml:mmultiscripts><mml:mi>Sn</mml:mi><mml:mprescripts /><mml:none /><mml:mn>120</mml:mn></mml:mmultiscripts></mml:mrow></mml:math> reaction. Physical Review C, 2021, 103, .	2.9	8
75	Quasi-free 238U cross section in macroscopicâ€“microscopic approach. Nuclear Physics A, 2003, 713, 24-44.	1.5	7
76	Reinterpreting the energy dependence of the optical potential. Journal of Physics G: Nuclear and Particle Physics, 2016, 43, 015107.	3.6	7
77	Investigation of the one-neutron transfer in C13+Si28 at Elab=30 and 34 MeV. Physical Review C, 2020, 101, .	2.9	7
78	Structure effects in the elastic scattering for the 16O + 46,50Ti systems. Nuclear Physics A, 2007, 781, 342-349.	1.5	6
79	Tunneling through a parabolic barrier coupled to an oscillatory degree of freedom: Application to heavy-ion fusion at sub-barrier energies. Nuclear Physics A, 2007, 786, 90-106.	1.5	6
80	Nonlocal effects in the8Bebreakup. Physical Review C, 1998, 58, 1627-1633.	2.9	5
81	Hindrance of fusion induced by 6He. Nuclear Physics A, 2007, 787, 225-230.	1.5	5
82	FUSION ENHANCEMENT/SUPPRESSION AND IRREVERSIBILITY IN REACTIONS INDUCED BY WEAKLY BOUND NUCLEI. International Journal of Modern Physics E, 2011, 20, 929-933.	1.0	5
83	Î³-Particle coincidence technique for the study of nuclear reactions. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2014, 749, 19-26.	1.6	4
84	Pycnonuclear reaction rates between neutron-rich nuclei. Nuclear Physics A, 2005, 758, 134-137.	1.5	3
85	Transition densities in the context of the generalized rotation-vibration model. Journal of Physics G: Nuclear and Particle Physics, 2017, 44, 105102.	3.6	3
86	Effect of thousands of inelastic couplings on the elastic scattering channel. Journal of Physics G: Nuclear and Particle Physics, 2020, 47, 105103.	3.6	3
87	Velocity-dependent model for the <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mrow><mml:mi>Î±</mml:mi><mml:mtext>â€“</mml:mtext><mml:mi>Î±	2.9	3
88	The role of inelastic couplings on the ^{12}C+^{12}C fusion at sub-barrier energies. European Physical Journal A, 2022, 58, .	2.5	3
89	The ion - ion potential and neutron transfer processes in the systems at sub-barrier energies. Journal of Physics G: Nuclear and Particle Physics, 1997, 23, 1473-1477.	3.6	2
90	Target characteristics and the precision of nuclear measurements. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 1997, 397, 163-171.	1.6	2

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91	General behavior of the effective nucleon-nucleon interaction as a function of the relative velocity. Physical Review C, 2005, 72, .	2.9	2
92	Comparison between the zero point motion and generalized frozen approximation models in accounting for heavy-ion fusion data. Physical Review C, 2007, 76, .	2.9	2
93	Hyperdeformed band in36Ar populated in the12C +24Mg elastic scattering. Journal of Physics: Conference Series, 2008, 111, 012037.	0.4	2
94	Effect on the heavy-ion fusion and elastic scattering cross sections of common approximations assumed in coupled-channel calculations. Journal of Physics G: Nuclear and Particle Physics, 2009, 36, 025102.	3.6	2
95	Exploring the potential of the SÃ£o Paulo Potential. EPJ Web of Conferences, 2010, 2, 02002.	0.3	2
96	The role of couplings in nuclear rainbow formation at energies far above the barrier. , 2012, , .		2
97	Cluster structures observed in40Ca from12C+28Si scattering. Journal of Physics: Conference Series, 2013, 436, 012015.	0.4	2
98	Effects of configuration mixing in heavy-ion elastic scattering. EPJ Web of Conferences, 2014, 66, 03067.	0.3	2
99	Thickness measurements of carbon stripper foils using optical transmittance. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 1993, 334, 181-184.	1.6	1
100	Pycnonuclear 12C+12C reaction at zero temperature. Journal of Physics G: Nuclear and Particle Physics, 2005, 31, S1859-S1863.	3.6	1
101	Fusion and Breakup of Weakly Bound Nuclei. AIP Conference Proceedings, 2006, , .	0.4	1
102	Folding-type coupling potentials in the context of the generalized rotationâ€“vibration model. Journal of Physics G: Nuclear and Particle Physics, 2018, 45, 035104.	3.6	1
103	Role of inelastic couplings in the 4He + 208Pb elastic scattering in a wide energy range. Journal of Physics G: Nuclear and Particle Physics, 0, , .	3.6	1
104	Near-Barrier Elastic Scattering of Weakly Bound Nuclei and the Threshold Anomaly. AIP Conference Proceedings, 2005, , .	0.4	0
105	Low Energy Transfer Cross-Section for Borromean Halo Nuclei and the Breakup Threshold Anomaly. AIP Conference Proceedings, 2006, , .	0.4	0
106	Elastic Scattering and Reaction Cross Section of the 6He+27Al System Close to the Coulomb Barrier. AIP Conference Proceedings, 2006, , .	0.4	0
107	The surface geometry of exotic nuclei. AIP Conference Proceedings, 2007, , .	0.4	0
108	AN IMAGINARY POTENTIAL FOR DISSIPATIVE PROCESSES IN HEAVY ION REACTIONS. , 2009, , .		0

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109	Experimental Determination of the [sup 6,7]Li Nucleon Densities. , 2009, , .		0
110	A New Technique To Investigate Total Reaction Cross Sections. , 2010, , .		0
111	Calculation of deformed double-folding potentials in the context of the generalized rotation-vibration model. Journal of Physics G: Nuclear and Particle Physics, 2014, 41, 055114.	3.6	0