

# Gordon Baym

## List of Publications by Year in descending order

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Version: 2024-02-01

55  
papers

3,633  
citations

236612

25  
h-index

223531

46  
g-index

56  
all docs

56  
docs citations

56  
times ranked

2364  
citing authors

#	ARTICLE	IF	CITATIONS
1	Ground-State Properties of Magnetically Trapped Bose-Condensed Rubidium Gas. Physical Review Letters, 1996, 76, 6-9.	2.9	628
2	From hadrons to quarks in neutron stars: a review. Reports on Progress in Physics, 2018, 81, 056902.	8.1	437
3	Superfluidity in Neutron Stars. Nature, 1969, 224, 673-674.	13.7	358
4	Spin Up in Neutron Stars : The Future of the Vela Pulsar. Nature, 1969, 224, 872-874.	13.7	319
5	Astrophysical measurement of the equation of state of neutron star matter. Physical Review D, 2010, 82, .	1.6	252
6	Fragmentation of Bose-Einstein condensates. Physical Review A, 2006, 74, .	1.0	244
7	Phonon-Quasiparticle Interactions in Dilute Solutions of He3 in Superfluid He4: I. Phonon Thermal Conductivity and Ultrasonic Attenuation. Physical Review, 1967, 164, 235-244.	2.7	115
8	Phenomenological QCD equation of state for massive neutron stars. Physical Review D, 2015, 91, .	1.6	114
9	Electrical Conductivity of Neutron Star Matter. Nature, 1969, 224, 674-675.	13.7	105
10	Tkachenko Modes of Vortex Lattices in Rapidly Rotating Bose-Einstein Condensates. Physical Review Letters, 2003, 91, 110402.	2.9	105
11	Electrical conductivity in the early universe. Physical Review D, 1997, 56, 5254-5259.	1.6	88
12	Phase structure, collective modes, and the axial anomaly in dense QCD. Physical Review D, 2007, 76, .	1.6	87
13	Coherence and Clock Shifts in Ultracold Fermi Gases with Resonant Interactions. Physical Review Letters, 2007, 99, 190407.	2.9	78
14	Nambu-Jona-Lasinio model of dense three-flavor matter with axial anomaly: The low temperature critical point and BEC-BCS diquark crossover. Physical Review D, 2010, 81, .	1.6	74
15	Self-Consistent Approximations in Relativistic Plasmas: Quasiparticle Analysis of the Thermodynamic Properties. Journal of Statistical Physics, 1998, 93, 843-861.	0.5	67
16	Testing Dark Decays of Baryons in Neutron Stars. Physical Review Letters, 2018, 121, 061801.	2.9	57
17	Mobility tensor of negative ions in superfluid $^3\text{He-A}$ . Journal of Low Temperature Physics, 1980, 40, 297-356.	0.6	51
18	Renormalization of interactions of ultracold atoms in simulated Rashba gauge fields. Physical Review A, 2011, 84, .	1.0	37

#	ARTICLE	IF	CITATIONS
19	Emission Polarization of Europium and Terbium Chelates. Journal of Physical Chemistry B, 2003, 107, 12862-12873.	1.2	36
20	Damping of gravitational waves by matter. Physical Review D, 2017, 96, .	1.6	31
21	Thermal fluctuations of gauge fields and first order phase transitions in color superconductivity. Physical Review D, 2004, 69, .	1.6	30
22	Two-slit diffraction with highly charged particles: Niels Bohr's consistency argument that the electromagnetic field must be quantized. Proceedings of the National Academy of Sciences of the United States of America, 2009, 106, 3035-3040.	3.3	30
23	Landau critical velocity in weakly interacting Bose gases. Physical Review A, 2012, 86, .	1.0	30
24	Continuity of vortices from the hadronic to the color-flavor locked phase in dense matter. Physical Review D, 2019, 99, .	1.6	27
25	Effective repulsion in dense quark matter from nonperturbative gluon exchange. Physical Review D, 2019, 100, .	1.6	25
26	Rotating Bose-Einstein condensates with attractive interactions. Physical Review A, 2004, 70, .	1.0	21
27	Rapidly Rotating Bose-Einstein Condensates. Journal of Low Temperature Physics, 2005, 138, 601-610.	0.6	19
28	Self-similar Expansion of a Turbulent Bose-Einstein Condensate: A Generalized Hydrodynamic Model. Journal of Low Temperature Physics, 2013, 170, 133-142.	0.6	19
29	Condensate superfluidity and infrared structure of the single-particle Green's function: The Josephson relation. Physical Review B, 2007, 76, .	1.1	17
30	Virtual photon polarization in ultrarelativistic heavy-ion collisions. Physical Review C, 2017, 95, .	1.1	14
31	Searching for low mass dark matter via phonon creation in superfluid ${}^4\text{He}$ . Physical Review D, 2020, 102, .	1.6	13
32	Antiferromagnetic ground state of two-component dipolar Fermi gases: An analog of meson condensation in nuclear matter. Physical Review A, 2013, 87, .	1.0	12
33	Can Pulsar Masses be Determined ?. Nature, 1970, 225, 353-354.	13.7	10
34	CONSERVATION LAWS AND THE QUANTUM THEORY OF TRANSPORT: THE EARLY DAYS. , 2000, , .		10
35	Normal mass density of a superfluid Fermi gas at unitarity. Physical Review A, 2013, 88, .	1.0	9
36	Transport in very dilute solutions of ${}^3\text{He}$ in superfluid ${}^4\text{He}$ . Physical Review B, 2013, 88, .	1.1	8

#	ARTICLE	IF	CITATIONS
37	Evolution of primordial neutrino helicities in cosmic gravitational inhomogeneities. Physical Review D, 2021, 103, .	1.1	8
38	Evolution of Primordial Neutrino Helicities in Astrophysical Magnetic Fields and Implications for Their Detection. Physical Review Letters, 2021, 126, 191803.	2.9	7
40	Neutron stars and quark matter. AIP Conference Proceedings, 2007, , .	0.3	6
41	Low-Temperature Transport Properties of Very Dilute Classical Solutions of $^3\text{He}$ in Superfluid $^4\text{He}$ . Journal of Low Temperature Physics, 2015, 178, 200-228.	0.6	6
42	Elementary quantum mechanics of the neutron with an electric dipole moment. Proceedings of the National Academy of Sciences of the United States of America, 2016, 113, 7438-7442.	3.3	6
43	Hanbury Brown-Twiss Interferometry with Electrons: Coulomb vs. Quantum Statistics. , 2014, , 201-210.		3
44	Superfluid transition temperature and fluctuation theory of spin-orbit- and Rabi-coupled fermions with tunable interactions. Physical Review A, 2022, 105, .	1.0	3
45	BCS FROM NUCLEI AND NEUTRON STARS TO QUARK MATTER AND COLD ATOMS. International Journal of Modern Physics B, 2010, 24, 3968-3982.	1.0	2
46	Retrospective of Charles Pence Slichter (NAS 1967). Proceedings of the National Academy of Sciences of the United States of America, 2018, 115, 5624-5625.	3.3	1
47	The Golden Era of Neutron Stars: From Hadrons to Quarks. , 2019, , .		1
48	From nuclear to unnuclear physics. Proceedings of the National Academy of Sciences of the United States of America, 2021, 118, e2113775118.	3.3	1
49	THE QUANTUM MECHANICS OF HANBURY-BROWN TWISS INTERFEROMETRY IN ULTRARELATIVISTIC HEAVY-ION COLLISIONS. , 1998, , .		1
50	Chiral-Super Interplay in QCD. Progress of Theoretical Physics Supplement, 2007, 168, 422-425.	0.2	0
51	BEC-BCS crossover driven by the axial anomaly in the NJL model. , 2010, , .		0
52	NEUTRON STARS AND THE PROPERTIES OF MATTER UNDER EXTREME CONDITIONS. , 2004, , .		0
53	NEW STATES OF QUANTUM MATTER. , 2008, , .		0
54	BCS FROM NUCLEI AND NEUTRON STARS TO QUARK MATTER AND COLD ATOMS. , 2010, , 509-523.		0

#	ARTICLE	IF	CITATIONS
55	TRANSPORT QUASIPARTICLES AND TRANSVERSE INTERACTIONS IN QUARK-GLUON PLASMAS., 1996,, .		0