

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 | Superfluid transition temperature and fluctuation theory of spin-orbit- and Rabi-coupled fermions with tunable interactions. <i>Physical Review A</i> , 2022, 105, . | 1.0 | 3 |
| 2 | Evolution of Primordial Neutrino Helicities in Astrophysical Magnetic Fields and Implications for Their Detection. <i>Physical Review Letters</i> , 2021, 126, 191803. | 2.9 | 7 |
| 3 | Evolution of primordial neutrino helicities in cosmic gravitational inhomogeneities. <i>Physical Review D</i> , 2021, 103, . | 1.6 | 8 |
| 4 | From nuclear to unnuclear physics. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2021, 118, e2113775118. | 3.3 | 1 |
| 5 | Searching for low mass dark matter via phonon creation in superfluid ^4He . <i>Physical Review D</i> , 2020, 102, . | 1.6 | 13 |
| 6 | Continuity of vortices from the hadronic to the color-flavor locked phase in dense matter. <i>Physical Review D</i> , 2019, 99, . | 1.6 | 27 |
| 7 | The Golden Era of Neutron Stars: From Hadrons to Quarks. , 2019, , . | | 1 |
| 8 | Effective repulsion in dense quark matter from nonperturbative gluon exchange. <i>Physical Review D</i> , 2019, 100, . | 1.6 | 25 |
| 9 | From hadrons to quarks in neutron stars: a review. <i>Reports on Progress in Physics</i> , 2018, 81, 056902. | 8.1 | 437 |
| 10 | Retrospective of Charles Pence Slichter (NAS 1967). <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2018, 115, 5624-5625. | 3.3 | 1 |
| 11 | Testing Dark Decays of Baryons in Neutron Stars. <i>Physical Review Letters</i> , 2018, 121, 061801. | 2.9 | 57 |
| 12 | Damping of gravitational waves by matter. <i>Physical Review D</i> , 2017, 96, . | 1.6 | 31 |
| 13 | Virtual photon polarization in ultrarelativistic heavy-ion collisions. <i>Physical Review C</i> , 2017, 95, . | 1.1 | 14 |
| 14 | Elementary quantum mechanics of the neutron with an electric dipole moment. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2016, 113, 7438-7442. | 3.3 | 6 |
| 15 | Transport Coefficients and Solutions to the Boltzmann Equation in Superfluid ^3He . <i>Physical Review D</i> , 2015, 91, . | 1.1 | 8 |
| 16 | Phenomenological QCD equation of state for massive neutron stars. <i>Physical Review D</i> , 2015, 91, . | 1.6 | 114 |
| 17 | Low-Temperature Transport Properties of Very Dilute Classical Solutions of ^3He in Superfluid ^4He . <i>Journal of Low Temperature Physics</i> , 2015, 178, 200-228. | 0.6 | 6 |
| 18 | Hanbury Brown-Twiss Interferometry with Electrons: Coulomb vs. Quantum Statistics. , 2014, , 201-210. | | 3 |

| # | ARTICLE | IF | CITATIONS |
|----|--|-----|-----------|
| 19 | 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 |
| 20 | 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 |
| 21 | Transport in very dilute solutions of ^3He in superfluid ^4He . Physical Review B, 2013, 88, . | 1.1 | 8 |
| 22 | Normal mass density of a superfluid Fermi gas at unitarity. Physical Review A, 2013, 88, . | 1.0 | 9 |
| 23 | Landau critical velocity in weakly interacting Bose gases. Physical Review A, 2012, 86, . | 1.0 | 30 |
| 24 | Renormalization of interactions of ultracold atoms in simulated Rashba gauge fields. Physical Review A, 2011, 84, . | 1.0 | 37 |
| 25 | Nambu's 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 |
| 26 | 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 |
| 27 | BEC-BCS crossover driven by the axial anomaly in the NJL model. , 2010, , . | | 0 |
| 28 | Astrophysical measurement of the equation of state of neutron star matter. Physical Review D, 2010, 82, . | 1.6 | 252 |
| 29 | BCS FROM NUCLEI AND NEUTRON STARS TO QUARK MATTER AND COLD ATOMS. , 2010, , 509-523. | | 0 |
| 30 | 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 |
| 31 | NEW STATES OF QUANTUM MATTER. , 2008, , . | | 0 |
| 32 | Chiral-Super Interplay in QCD. Progress of Theoretical Physics Supplement, 2007, 168, 422-425. | 0.2 | 0 |
| 33 | Coherence and Clock Shifts in Ultracold Fermi Gases with Resonant Interactions. Physical Review Letters, 2007, 99, 190407. | 2.9 | 78 |
| 34 | Neutron stars and quark matter. AIP Conference Proceedings, 2007, , . | 0.3 | 6 |
| 35 | Condensate superfluidity and infrared structure of the single-particle Green's function: The Josephson relation. Physical Review B, 2007, 76, . | 1.1 | 17 |
| 36 | Phase structure, collective modes, and the axial anomaly in dense QCD. Physical Review D, 2007, 76, . | 1.6 | 87 |

| # | ARTICLE | IF | CITATIONS |
|----|--|------|-----------|
| 37 | Fragmentation of Bose-Einstein condensates. Physical Review A, 2006, 74, . | 1.0 | 244 |
| 38 | Rapidly Rotating Bose-Einstein Condensates. Journal of Low Temperature Physics, 2005, 138, 601-610. | 0.6 | 19 |
| 39 | Thermal fluctuations of gauge fields and first order phase transitions in color superconductivity. Physical Review D, 2004, 69, . | 1.6 | 30 |
| 40 | Rotating Bose-Einstein condensates with attractive interactions. Physical Review A, 2004, 70, . | 1.0 | 21 |
| 41 | NEUTRON STARS AND THE PROPERTIES OF MATTER UNDER EXTREME CONDITIONS. , 2004, , . | | 0 |
| 42 | Emission Polarization of Europium and Terbium Chelates. Journal of Physical Chemistry B, 2003, 107, 12862-12873. | 1.2 | 36 |
| 43 | Tkachenko Modes of Vortex Lattices in Rapidly Rotating Bose-Einstein Condensates. Physical Review Letters, 2003, 91, 110402. | 2.9 | 105 |
| 44 | CONSERVATION LAWS AND THE QUANTUM THEORY OF TRANSPORT: THE EARLY DAYS. , 2000, , . | | 10 |
| 45 | Self-Consistent Approximations in Relativistic Plasmas: Quasiparticle Analysis of the Thermodynamic Properties. Journal of Statistical Physics, 1998, 93, 843-861. | 0.5 | 67 |
| 46 | THE QUANTUM MECHANICS OF HANBURY-BROWN TWISS INTERFEROMETRY IN ULTRARELATIVISTIC HEAVY-ION COLLISIONS. , 1998, , . | | 1 |
| 47 | Electrical conductivity in the early universe. Physical Review D, 1997, 56, 5254-5259. | 1.6 | 88 |
| 48 | Ground-State Properties of Magnetically Trapped Bose-Condensed Rubidium Gas. Physical Review Letters, 1996, 76, 6-9. | 2.9 | 628 |
| 49 | TRANSPORT QUASIPARTICLES AND TRANSVERSE INTERACTIONS IN QUARK-GLUON PLASMAS. , 1996, , . | | 0 |
| 50 | Mobility tensor of negative ions in superfluid $^3\text{He-A}$. Journal of Low Temperature Physics, 1980, 40, 297-356. | 0.6 | 51 |
| 51 | Can Pulsar Masses be Determined ?. Nature, 1970, 225, 353-354. | 13.7 | 10 |
| 52 | Superfluidity in Neutron Stars. Nature, 1969, 224, 673-674. | 13.7 | 358 |
| 53 | Electrical Conductivity of Neutron Star Matter. Nature, 1969, 224, 674-675. | 13.7 | 105 |
| 54 | Spin Up in Neutron Stars : The Future of the Vela Pulsar. Nature, 1969, 224, 872-874. | 13.7 | 319 |

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|----|--|-----|-----------|
| 55 | Phonon-Quasiparticle Interactions in Dilute Solutions of He ³ in Superfluid He ⁴ : I. Phonon Thermal Conductivity and Ultrasonic Attenuation. <i>Physical Review</i> , 1967, 164, 235-244. | 2.7 | 115 |