

Heinz Siedentop

List of Publications by Year in descending order

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47
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docs citations

47
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227
citing authors

#	ARTICLE	IF	CITATIONS
1	On the leading energy correction for the statistical model of the atom: Interacting case. Communications in Mathematical Physics, 1987, 112, 471-490.	2.2	78
2	The spectrum of relativistic one-electron atoms according to Bethe and Salpeter. Communications in Mathematical Physics, 1996, 178, 733-746.	2.2	68
3	On the leading correction of the Thomas-Fermi model: Lower bound. Inventiones Mathematicae, 1989, 97, 159-193.	2.5	57
4	A Minimax Principle for the Eigenvalues in Spectral Gaps. Journal of the London Mathematical Society, 1999, 60, 490-500.	1.0	57
5	On the Stability of the Relativistic Electron-Positron Field. Communications in Mathematical Physics, 1999, 201, 445-460.	2.2	49
6	Stability and instability of relativistic electrons in classical electromagnetic fields. Journal of Statistical Physics, 1997, 89, 37-59.	1.2	47
7	Müller's exchange-correlation energy in density-matrix-functional theory. Physical Review A, 2007, 76, .	2.5	44
8	A new phase space localization technique with application to the sum of negative eigenvalues of Schrödinger operators. Annales Scientifiques De L'Ecole Normale Supérieure, 1991, 24, 215-225.	0.8	27
9	Stability of Relativistic Matter with Magnetic Fields. Physical Review Letters, 1997, 79, 1785-1788.	7.8	21
10	On the Hartree-Fock Equations of the Electron-Positron Field. Communications in Mathematical Physics, 2005, 255, 131-159.	2.2	21
11	The Ground State Energy of Heavy Atoms: Relativistic Lowering of the Leading Energy Correction. Communications in Mathematical Physics, 2008, 278, 549-566.	2.2	21
12	Renormalization of the Regularized Relativistic Electron-Positron Field. Communications in Mathematical Physics, 2000, 213, 673-683.	2.2	19
13	Upper bound on the ground state energy of atoms that proves Scott's conjecture. Physics Letters, Section A: General, Atomic and Solid State Physics, 1987, 120, 341-342.	2.1	18
14	The Douglas-Kroll-Heř Method: Convergence and Block-Diagonalization of Dirac Operators. Annales Henri Poincaré, 2006, 7, 45-58.	1.7	18
15	An analytic Douglas-Kroll-Heř method. Physics Letters, Section A: General, Atomic and Solid State Physics, 2005, 341, 473-478.	2.1	16
16	Equivalence of Sobolev Norms Involving Generalized Hardy Operators. International Mathematics Research Notices, 2021, 2021, 2284-2303.	1.0	16
17	Non-Perturbative Mass and Charge Renormalization in Relativistic No-Photon Quantum Electrodynamics. Communications in Mathematical Physics, 2003, 243, 241-260.	2.2	15
18	Signatures of Wigner molecule formation in interacting Dirac fermion quantum dots. Physical Review B, 2011, 83, .	3.2	15

#	ARTICLE	IF	CITATIONS
19	Multiparticle equations for interacting Dirac fermions in magnetically confined graphene quantum dots. <i>Journal of Physics A: Mathematical and Theoretical</i> , 2010, 43, 215202.	2.1	14
20	On the number of bound states of a bosonic N -particle Coulomb system. <i>Mathematische Zeitschrift</i> , 1993, 214, 441-459.	0.9	12
21	Stability of atoms and molecules in an ultrarelativistic Thomas-Fermi-Weizsäcker model. <i>Journal of Mathematical Physics</i> , 2008, 49, 012302.	1.1	12
22	Counting eigenvalues using coherent states with an application to Dirac and Schrödinger operators in the semi-classical limit. <i>Arkiv for Matematik</i> , 1996, 34, 265-283.	0.5	11
23	Stability of impurities with Coulomb potential in graphene with homogeneous magnetic field. <i>Journal of Mathematical Physics</i> , 2012, 53, .	1.1	11
24	Dipoles in graphene have infinitely many bound states. <i>Journal of Mathematical Physics</i> , 2014, 55, .	1.1	10
25	Solutions of the Dirac-Fock Equations and the Energy of the Electron-Positron Field. <i>Archive for Rational Mechanics and Analysis</i> , 2007, 184, 1-22.	2.4	9
26	The Sharp Bound on the Stability of the Relativistic Electron-Positron Field in Hartree-Fock Approximation. <i>Communications in Mathematical Physics</i> , 2000, 211, 629-642.	2.2	8
27	The Ground State Energy of Heavy Atoms: The Leading Correction. <i>Communications in Mathematical Physics</i> , 2015, 339, 589-617.	2.2	8
28	Convexity and concavity of eigenvalue sums. <i>Journal of Statistical Physics</i> , 1991, 63, 811-816.	1.2	7
29	The ground-state energy of heavy atoms according to Brown and Ravenhall: absence of relativistic effects in leading order. <i>Journal of Physics A</i> , 2006, 39, 10405-10414.	1.6	7
30	Remarks on the Mittleman $\max\text{-min}$ variational method for the electron-positron field. <i>Journal of Physics A</i> , 2006, 39, 85-98.	1.6	6
31	The optimal size of the exchange hole and reduction to one-particle Hamiltonians. <i>Theoretical Chemistry Accounts</i> , 2004, 111, 49-53.	1.4	5
32	Regularization of atomic Schrödinger operators with magnetic field. <i>Mathematische Zeitschrift</i> , 1995, 218, 427-437.	0.9	4
33	A Generalization of the Kustaanheimo-Stiefel Transform for Two-Centre Systems. <i>Bulletin of the London Mathematical Society</i> , 1996, 28, 33-42.	0.8	4
34	Dissociation of Homonuclear Relativistic Molecular Ions. <i>Annales Henri Poincaré</i> , 2001, 2, 27-40.	1.7	4
35	Asymptotic behavior of the one-particle density matrix of atoms at distances Z^{-1} from the nucleus. <i>Mathematische Zeitschrift</i> , 2001, 236, 787-796.	0.9	4
36	On the Maximal Excess Charge of the Chandrasekhar-Coulomb Hamiltonian in Two Dimension. <i>Letters in Mathematical Physics</i> , 2013, 103, 843-849.	1.1	4

#	ARTICLE	IF	CITATIONS
37	The Atomic Density on the Thomas-Fermi Length Scale for the Chandrasekhar Hamiltonian. Reports on Mathematical Physics, 2019, 83, 387-391.	0.8	4
38	The maximal negative ion of the time-dependent Thomas-Fermi and the Vlasov atom. Journal of Mathematical Physics, 2018, 59, 051902.	1.1	3
39	Asymptotically correct lower bound for the sum of negative eigenvalues of Schrödinger operators through a decomposition of unity given by Macke. Asymptotic Analysis, 1994, 8, 65-72.	0.5	2
40	An upper bound on the ionic ground state density at the nucleus. Reports on Mathematical Physics, 1995, 36, 91-98.	0.8	2
41	The spectrum of relativistic atoms according to Bethe and Salpeter and beyond. Journal of Computational and Applied Mathematics, 2007, 208, 155-163.	2.0	2
42	Blow-up of solutions to the Patlak-Keller-Segel equation in dimension $n \geq 2$. Applied Mathematics Letters, 2017, 74, 102-107.	2.7	2
43	On the excess charge of a relativistic statistical model of molecules with an inhomogeneity correction. Journal of Physics A: Mathematical and Theoretical, 2020, 53, 395201.	2.1	2
44	Universality of the Fermi-Hellmann model. Journal of Mathematical Analysis and Applications, 1991, 157, 385-394.	1.0	1
45	Proof of the strong Scott conjecture for heavy atoms: the Furry picture. Annales Henri Lebesgue, 0, 5, 611-642.	0.0	1
46	Positivity of $ p a q b+ q b p a$. Journal of Functional Analysis, 2013, 264, 2817-2824.	1.4	0
47	The Strong Scott Conjecture: the Density of Heavy Atoms Close to the Nucleus. , 2020, , 257-272.		0