Eberhard K U Gross

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65 256 25,012 155 h-index g-index citations papers 27,276 7.06 4.1 257 avg, IF L-index ext. citations ext. papers

#	Paper	IF	Citations
256	Density-Functional Theory for Time-Dependent Systems. <i>Physical Review Letters</i> , 1984 , 52, 997-1000	7.4	6170
255	Excitation energies from time-dependent density-functional theory. <i>Physical Review Letters</i> , 1996 , 76, 1212-1215	7.4	1324
254	Time-dependent density functional theory. Annual Review of Physical Chemistry, 2004, 55, 427-55	15.7	932
253	Time-Dependent Density-Functional Theory. Advances in Quantum Chemistry, 1990, 21, 255-291	1.4	893
252	Local density-functional theory of frequency-dependent linear response. <i>Physical Review Letters</i> , 1985 , 55, 2850-2852	7.4	832
251	Reproducibility in density functional theory calculations of solids. <i>Science</i> , 2016 , 351, aad3000	33.3	784
250	Time-dependent density functional theory: past, present, and future. <i>Journal of Chemical Physics</i> , 2005 , 123, 62206	3.9	665
249	octopus: a tool for the application of time-dependent density functional theory. <i>Physica Status Solidi (B): Basic Research</i> , 2006 , 243, 2465-2488	1.3	659
248	Density functional theory of time-dependent phenomena 1996 , 81-172		424
247	Exact Coulomb cutoff technique for supercell calculations. <i>Physical Review B</i> , 2006 , 73,	3.3	286
246	Exact factorization of the time-dependent electron-nuclear wave function. <i>Physical Review Letters</i> , 2010 , 105, 123002	7.4	285
245	Density-functional theory for superconductors. <i>Physical Review Letters</i> , 1988 , 60, 2430-2433	7.4	281
244	Understanding band gaps of solids in generalized Kohn-Sham theory. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2017 , 114, 2801-2806	11.5	280
243	Fundamentals of Time-Dependent Density Functional Theory. Lecture Notes in Physics, 2012,	0.8	277
242	How to represent crystal structures for machine learning: Towards fast prediction of electronic properties. <i>Physical Review B</i> , 2014 , 89,	3.3	275
241	Time-dependent quantum transport: A practical scheme using density functional theory. <i>Physical Review B</i> , 2005 , 72,	3.3	275
240	Density-functional theory for ensembles of fractionally occupied states. I. Basic formalism. <i>Physical Review A</i> , 1988 , 37, 2809-2820	2.6	271

(2015-2007)

239	Quantum optimal control theory. <i>Journal of Physics B: Atomic, Molecular and Optical Physics</i> , 2007 , 40, R175-R211	1.3	258	
238	Intense-field double ionization of helium: identifying the mechanism. <i>Physical Review Letters</i> , 2000 , 85, 4707-10	7.4	255	
237	Rayleigh-Ritz variational principle for ensembles of fractionally occupied states. <i>Physical Review A</i> , 1988 , 37, 2805-2808	2.6	252	
236	Ab initio theory of superconductivity. I. Density functional formalism and approximate functionals. <i>Physical Review B</i> , 2005 , 72,	3.3	237	
235	Density-functional theory for ensembles of fractionally occupied states. II. Application to the He atom. <i>Physical Review A</i> , 1988 , 37, 2821-2833	2.6	222	
234	Time-dependent optimized effective potential. <i>Physical Review Letters</i> , 1995 , 74, 872-875	7.4	211	
233	Ab initio theory of superconductivity. II. Application to elemental metals. <i>Physical Review B</i> , 2005 , 72,	3.3	199	
232	Multicomponent density-functional theory for electrons and nuclei. <i>Physical Review Letters</i> , 2001 , 86, 2984-7	7.4	183	
231	Ab initio description of high-temperature superconductivity in dense molecular hydrogen. <i>Physical Review Letters</i> , 2008 , 100, 257001	7:4	167	
230	Correlated electron-nuclear dynamics: exact factorization of the molecular wavefunction. <i>Journal of Chemical Physics</i> , 2012 , 137, 22A530	3.9	157	
229	Excitations in time-dependent density-functional theory. <i>Physical Review Letters</i> , 2003 , 90, 043005	7.4	148	
228	Superconductivity in lithium, potassium, and aluminum under extreme pressure: a first-principles study. <i>Physical Review Letters</i> , 2006 , 96, 047003	7.4	138	
227	Density-functional theory using an optimized exchange-correlation potential. <i>Chemical Physics Letters</i> , 1995 , 240, 141-150	2.5	137	
226	Bootstrap approximation for the exchange-correlation kernel of time-dependent density-functional theory. <i>Physical Review Letters</i> , 2011 , 107, 186401	7.4	131	
225	High temperature superconductivity in sulfur and selenium hydrides at high pressure. <i>European Physical Journal B</i> , 2016 , 89, 1	1.2	129	
224	Superconducting properties of MgB2 from first principles. <i>Physical Review Letters</i> , 2005 , 94, 037004	7.4	122	
223	Reduced density matrix functional for many-electron systems. <i>Physical Review B</i> , 2008 , 78,	3.3	115	
222	Laser-induced demagnetization at ultrashort time scales: predictions of TDDFT. <i>Journal of Chemical Theory and Computation</i> , 2015 , 11, 4870-4	6.4	114	

221	Dynamical Coulomb blockade and the derivative discontinuity of time-dependent density functional theory. <i>Physical Review Letters</i> , 2010 , 104, 236801	7.4	109
220	Superconductivity in metastable phases of phosphorus-hydride compounds under high pressure. <i>Physical Review B</i> , 2016 , 93,	3.3	108
219	Adiabatic approximation in nonperturbative time-dependent density-functional theory. <i>Physical Review Letters</i> , 2008 , 100, 153004	7.4	107
218	Spin-Density Functionals from Current-Density Functional Theory and Vice Versa: A Road towards New Approximations. <i>Physical Review Letters</i> , 1997 , 78, 1872-1875	7.4	105
217	Electron correlation energies from scaled exchange-correlation kernels: Importance of spatial versus temporal nonlocality. <i>Physical Review B</i> , 2000 , 61, 13431-13437	3.3	105
216	Ab Initio Nonadiabatic Dynamics with Coupled Trajectories: A Rigorous Approach to Quantum (De)Coherence. <i>Journal of Physical Chemistry Letters</i> , 2017 , 8, 3048-3055	6.4	101
215	Time-dependent electron localization function. <i>Physical Review A</i> , 2005 , 71,	2.6	101
214	Coupled-Trajectory Quantum-Classical Approach to Electronic Decoherence in Nonadiabatic Processes. <i>Physical Review Letters</i> , 2015 , 115, 073001	7.4	100
213	Toward the description of van der Waals interactions within density functional theory. <i>Journal of Computational Chemistry</i> , 1999 , 20, 12-22	3.5	100
212	Even-harmonic generation due to beyond-Born-Oppenheimer dynamics. <i>Physical Review Letters</i> , 2001 , 87, 103901	7.4	96
211	Time-dependent approach to electron pumping in open quantum systems. <i>Physical Review B</i> , 2008 , 77,	3.3	94
210	Anisotropic gap of superconducting CaC6: A first-principles density functional calculation. <i>Physical Review B</i> , 2007 , 75,	3.3	93
209	Optimal control of quantum rings by terahertz laser pulses. <i>Physical Review Letters</i> , 2007 , 98, 157404	7.4	93
208	Strong-field ionization dynamics of a model H2 molecule. <i>Physical Review A</i> , 2002 , 65,	2.6	91
207	Quantum-Classical Nonadiabatic Dynamics: Coupled- vs Independent-Trajectory Methods. <i>Journal of Chemical Theory and Computation</i> , 2016 , 12, 2127-43	6.4	91
206	Time-Dependent Density Functional Theory beyond Linear Response: An Exchange-Correlation Potential with Memory. <i>Physical Review Letters</i> , 1997 , 79, 1905-1908	7.4	90
205	Dynamical steps that bridge piecewise adiabatic shapes in the exact time-dependent potential energy surface. <i>Physical Review Letters</i> , 2013 , 110, 263001	7.4	88
204	Spurious interactions, and their correction, in the ensemble-Kohn-Sham scheme for excited States. <i>Physical Review Letters</i> , 2002 , 88, 033003	7.4	85

(2005-1986)

203	Local Density-Functional Theory of Frequency-Dependent Linear Response. <i>Physical Review Letters</i> , 1986 , 57, 923-923	7.4	83	
202	Is the molecular Berry phase an artifact of the Born-Oppenheimer approximation?. <i>Physical Review Letters</i> , 2014 , 113, 263004	7.4	81	
201	Density-matrix-power functional: Performance for finite systems and the homogeneous electron gas. <i>Physical Review A</i> , 2009 , 79,	2.6	80	
200	Thermal conductivity in PbTe from first principles. <i>Physical Review B</i> , 2015 , 91,	3.3	77	
199	Ab initio angle- and energy-resolved photoelectron spectroscopy with time-dependent density-functional theory. <i>Physical Review A</i> , 2012 , 85,	2.6	74	
198	Discontinuities of the exchange-correlation kernel and charge-transfer excitations in time-dependent density-functional theory. <i>Physical Review A</i> , 2012 , 85,	2.6	74	
197	The exact forces on classical nuclei in non-adiabatic charge transfer. <i>Journal of Chemical Physics</i> , 2015 , 142, 084303	3.9	73	
196	Molecular excitation energies from time-dependent density functional theory. <i>Computational and Theoretical Chemistry</i> , 2000 , 501-502, 353-367		69	
195	Correlation effects on the third-frequency-moment sum rule of electron liquids. <i>Physical Review B</i> , 1987 , 35, 3003-3004	3.3	68	
194	Electronic non-adiabatic states: towards a density functional theory beyond the Born-Oppenheimer approximation. <i>Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences</i> , 2014 , 372, 20130059	3	67	
193	Correlation potentials for molecular bond dissociation within the self-consistent random phase approximation. <i>Journal of Chemical Physics</i> , 2012 , 136, 034106	3.9	67	
192	Controlling the dynamics of many-electron systems from first principles: a combination of optimal control and time-dependent density-functional theory. <i>Physical Review Letters</i> , 2012 , 109, 153603	7.4	66	
191	Exact-exchange density-functional calculations for noble-gas solids. <i>Physical Review B</i> , 2004 , 69,	3.3	65	
190	Multicomponent density-functional theory for electrons and nuclei. <i>Physical Review A</i> , 2008 , 78,	2.6	64	
189	Gradient expansion of the Coulomb exchange energy. Zeitschrift Fil Physik A, 1981, 302, 103-106		64	
188	Vibrational properties of MnO and NiO from DFT +U-based density functional perturbation theory. <i>Physical Review B</i> , 2011 , 84,	3.3	62	
187	First-principles approach to noncollinear magnetism: towards spin dynamics. <i>Physical Review Letters</i> , 2007 , 98, 196405	7:4	62	
186	Optimal control of time-dependent targets. <i>Physical Review A</i> , 2005 , 71,	2.6	62	

185	Comparative study of many-body perturbation theory and time-dependent density functional theory in the out-of-equilibrium Anderson model. <i>Physical Review B</i> , 2011 , 84,	3.3	58
184	Two-band superconductivity in Pb from ab initio calculations. <i>Physical Review B</i> , 2007 , 75,	3.3	56
183	Time-dependent density-functional theory for superconductors. <i>Physical Review Letters</i> , 1994 , 73, 2915	- 3 2418	56
182	Mixed quantum-classical dynamics from the exact decomposition of electron-nuclear motion. <i>Europhysics Letters</i> , 2014 , 106, 33001	1.6	55
181	The optimized effective potential method of density functional theory: Applications to atomic and molecular systems. <i>International Journal of Quantum Chemistry</i> , 1997 , 64, 95-110	2.1	55
180	Excitation energies from time-dependent density functional theory using exact and approximate potentials. <i>International Journal of Quantum Chemistry</i> , 2000 , 80, 534-554	2.1	55
179	Density Functional Theory of Time-Dependent Systems. NATO ASI Series Series B: Physics, 1995, 149-171		55
178	Spectral density and metal-insulator phase transition in Mott insulators within reduced density matrix functional theory. <i>Physical Review Letters</i> , 2013 , 110, 116403	7.4	54
177	Thomas-Fermi approach to diatomic systems. I. Solution of the Thomas-Fermi and Thomas-Fermi-Dirac-Weizsdker equations. <i>Physical Review A</i> , 1979 , 20, 1798-1807	2.6	54
176	Nuclear velocity perturbation theory for vibrational circular dichroism: An approach based on the exact factorization of the electron-nuclear wave function. <i>Journal of Chemical Physics</i> , 2015 , 143, 07410	<i>§</i> .9	52
175	Exact conditions in finite-temperature density-functional theory. <i>Physical Review Letters</i> , 2011 , 107, 163	з 9 0ф	52
174	Electron-phonon interaction and superconductivity in metallic molecular hydrogen. II. Superconductivity under pressure. <i>Physical Review B</i> , 2010 , 81,	3.3	50
173	Classical nuclear motion coupled to electronic non-adiabatic transitions. <i>Journal of Chemical Physics</i> , 2014 , 141, 214101	3.9	49
172	Performance of one-body reduced density-matrix functionals for the homogeneous electron gas. <i>Physical Review B</i> , 2007 , 75,	3.3	48
171	Mixed quantum-classical dynamics on the exact time-dependent potential energy surface: a fresh look at non-adiabatic processes. <i>Molecular Physics</i> , 2013 , 111, 3625-3640	1.7	46
170	Molecular geometric phase from the exact electron-nuclear factorization. <i>Physical Review A</i> , 2016 , 93,	2.6	43
169	Current density functional theory of spontaneously magnetised solids. <i>Europhysics Letters</i> , 1997 , 40, 545-550	1.6	43
168	Tailoring laser pulses with spectral and fluence constraints using optimal control theory. <i>Journal of Optics B: Quantum and Semiclassical Optics</i> , 2005 , 7, S300-S312		42

(2013-2018)

167	Ab initio Eliashberg Theory: Making Genuine Predictions of Superconducting Features. <i>Journal of the Physical Society of Japan</i> , 2018 , 87, 041012	1.5	40	
166	Ultrafast laser induced local magnetization dynamics in Heusler compounds. <i>Scientific Reports</i> , 2016 , 6, 38911	4.9	40	
165	Exact Factorization-Based Density Functional Theory of Electrons and Nuclei. <i>Physical Review Letters</i> , 2016 , 117, 193001	7∙4	39	
164	Laser-induced electron localization in HI: mixed quantum-classical dynamics based on the exact time-dependent potential energy surface. <i>Physical Chemistry Chemical Physics</i> , 2015 , 17, 29271-80	3.6	39	
163	Electron-phonon interaction and superconductivity in metallic molecular hydrogen. I. Electronic and dynamical properties under pressure. <i>Physical Review B</i> , 2010 , 81,	3.3	39	
162	Scaling and virial theorems in current-density-functional theory. <i>Physical Review A</i> , 1996 , 53, R5-R8	2.6	39	
161	Accurate solution of the Thomas-Fermi-Dirac-WeizsEker variational equations for the case of neutral atoms and positive ions. <i>Zeitschrift Fil Physik A</i> , 1982 , 309, 5-11		39	
160	Electronic Flux Density beyond the Born-Oppenheimer Approximation. <i>Journal of Physical Chemistry A</i> , 2016 , 120, 3316-25	2.8	37	
159	Electronic Schrilinger equation with nonclassical nuclei. <i>Physical Review A</i> , 2014 , 89,	2.6	37	
158	Correlation effects in bistability at the nanoscale: Steady state and beyond. <i>Physical Review B</i> , 2012 , 85,	3.3	37	
157	Superconducting properties of MgB2 from first principles. <i>Physica C: Superconductivity and Its Applications</i> , 2007 , 456, 45-53	1.3	37	
156	Ab initio prediction of pressure-induced superconductivity in potassium. <i>Physical Review B</i> , 2006 , 73,	3.3	37	
155	Time-dependent natural orbitals and occupation numbers. Europhysics Letters, 2010, 92, 23001	1.6	36	
154	Local Density Approximation for Superconductors. <i>Physical Review Letters</i> , 1999 , 83, 2628-2631	7.4	36	
153	How Interatomic Steps in the Exact Kohn-Sham Potential Relate to Derivative Discontinuities of the Energy. <i>Journal of Physical Chemistry Letters</i> , 2017 , 8, 5974-5980	6.4	35	
152	Discontinuity of the chemical potential in reduced-density-matrix-functional theory. <i>Europhysics Letters</i> , 2007 , 77, 67003	1.6	35	
151	Open shells in reduced-density-matrix-functional theory. <i>Physical Review A</i> , 2005 , 72,	2.6	35	
150	Response to "Comment on 'Correlated electron-nuclear dynamics: exact factorization of the molecular wavefunction" [J. Chem. Phys. 139, 087101 (2013)]. <i>Journal of Chemical Physics</i> , 2013 , 139, 087102	3.9	34	

149	Discontinuities of the Chemical Potential in Reduced Density Matrix Functional Theory. <i>Zeitschrift Fur Physikalische Chemie</i> , 2010 , 224, 467-480	3.1	34
148	An exact factorization perspective on quantum interferences in nonadiabatic dynamics. <i>Journal of Chemical Physics</i> , 2016 , 145, 034103	3.9	34
147	Orbital magnetism in the density functional theory of superconductors. <i>Journal De Physique</i> , 1989 , 50, 2601-2612		33
146	Semiclassical analysis of the electron-nuclear coupling in electronic non-adiabatic processes. <i>Annalen Der Physik</i> , 2015 , 527, 546-555	2.6	32
145	Superconducting pairing mediated by spin fluctuations from first principles. <i>Physical Review B</i> , 2014 , 90,	3.3	32
144	Transverse spin-gradient functional for noncollinear spin-density-functional theory. <i>Physical Review Letters</i> , 2013 , 111, 156401	7.4	32
143	Exchange-energy functionals for finite two-dimensional systems. <i>Physical Review B</i> , 2007 , 76,	3.3	32
142	Local measurement of the Eliashberg function of Pb islands: enhancement of electron-phonon coupling by quantum well states. <i>Physical Review Letters</i> , 2015 , 114, 047002	7.4	31
141	Femtosecond laser pulse shaping for enhanced ionization. <i>Europhysics Letters</i> , 2009 , 87, 53001	1.6	31
140	On the mechanism of strong-field double photoionization in the helium atom. <i>Journal of Physics B: Atomic, Molecular and Optical Physics</i> , 2000 , 33, 433-442	1.3	31
139	Ultrafast demagnetization in bulk versus thin films: an ab initio study. <i>Journal of Physics Condensed Matter</i> , 2017 , 29, 224001	1.8	30
138	The optimal one dimensional periodic table: a modified Pettifor chemical scale from data mining. <i>New Journal of Physics</i> , 2016 , 18, 093011	2.9	30
137	Exact Single-Electron Approach to the Dynamics of Molecules in Strong Laser Fields. <i>Physical Review Letters</i> , 2017 , 118, 163202	7.4	30
136	A functional of the one-body-reduced density matrix derived from the homogeneous electron gas: Performance for finite systems. <i>Journal of Chemical Physics</i> , 2009 , 130, 064109	3.9	30
135	Electronic structure via potential functional approximations. <i>Physical Review Letters</i> , 2011 , 106, 236404	7.4	30
134	Optimal laser control of double quantum dots. <i>Physical Review B</i> , 2008 , 77,	3.3	30
133	An efficient algorithm for time propagation as applied to linearized augmented plane wave method. <i>Computer Physics Communications</i> , 2016 , 209, 92-95	4.2	30
132	Large magnetocrystalline anisotropy in tetragonally distorted Heuslers: a systematic study. <i>Journal Physics D: Applied Physics</i> , 2017 , 50, 095002	3	29

(2017-2009)

131	The role of Coulomb interaction in the superconducting properties of CaC6and H under pressure. Superconductor Science and Technology, 2009 , 22, 034006	3.1	29	
130	Resonant inelastic soft x-ray scattering of Be chalcogenides. <i>Physical Review B</i> , 2006 , 73,	3.3	29	
129	Asymptotic Properties of the Optimized Effective Potential. Advances in Quantum Chemistry, 1998, 31-	-4 8 .4	29	
128	Optimization schemes for selective molecular cleavage with tailored ultrashort laser pulses. <i>Chemical Physics</i> , 2011 , 391, 50-61	2.3	28	
127	Bound states in time-dependent quantum transport: oscillations and memory effects in current and density. <i>Physical Chemistry Chemical Physics</i> , 2009 , 11, 4535-8	3.6	28	
126	Time-dependent electron localization functions for coupled nuclear-electronic motion. <i>Journal of Chemical Physics</i> , 2004 , 121, 9666-70	3.9	28	
125	Relativistic framework for microscopic theories of superconductivity. I. The Dirac equation for superconductors. <i>Physical Review B</i> , 1999 , 59, 7140-7154	3.3	28	
124	Spin-multiplet energies from time-dependent density functional theory. <i>International Journal of Quantum Chemistry</i> , 1996 , 60, 1393-1401	2.1	28	
123	Ensemble-Density functional theory for excited states. <i>International Journal of Quantum Chemistry</i> , 1990 , 38, 707-716	2.1	28	
122	Time-dependent density-functional and reduced density-matrix methods for few electrons: Exact versus adiabatic approximations. <i>Chemical Physics</i> , 2011 , 391, 1-10	2.3	27	
121	Multicomponent density-functional theory for time-dependent systems. <i>Physical Review A</i> , 2007 , 76,	2.6	27	
120	Paramagnons in FeSe close to a magnetic quantum phase transition: Ab initio study. <i>Physical Review B</i> , 2012 , 86,	3.3	26	
119	Discrete peaks in above-threshold double-ionization spectra. <i>Physical Review A</i> , 2001 , 64,	2.6	26	
118	Competing Spin Transfer and Dissipation at Co/Cu(001) Interfaces on Femtosecond Timescales. <i>Physical Review Letters</i> , 2019 , 122, 067202	7.4	25	
117	Electronic, vibrational, and superconducting properties of CaBeSi: First-principles calculations. <i>Physical Review B</i> , 2009 , 79,	3.3	25	
116	Correlation energy of finite two-dimensional systems: Toward nonempirical and universal modeling. <i>Physical Review B</i> , 2009 , 79,	3.3	25	
115	Comparison of exact-exchange calculations for solids in current-spin-density- and spin-density-functional theory. <i>Physical Review B</i> , 2007 , 76,	3.3	25	
114	Reversible Formation of 2D Electron Gas at the LaFeO /SrTiO Interface via Control of Oxygen Vacancies. <i>Advanced Materials</i> , 2017 , 29, 1604447	24	24	

113	Ab initio theory of iron-based superconductors. <i>Physical Review B</i> , 2016 , 94,	3.3	24
112	Phononic self-energy effects and superconductivity in CaC6. <i>Physical Review B</i> , 2012 , 85,	3.3	24
111	The role of bound states in time-dependent quantum transport. <i>Applied Physics A: Materials Science and Processing</i> , 2008 , 93, 355-364	2.6	24
110	Time-dependent variational approach to molecules in strong laser fields. <i>Chemical Physics</i> , 2004 , 304, 183-202	2.3	24
109	Optimal control of laser-induced spin@rbit mediated ultrafast demagnetization. <i>New Journal of Physics</i> , 2016 , 18, 013014	2.9	24
108	Enhancing and controlling single-atom high-harmonic generation spectra: a time-dependent density-functional scheme. <i>European Physical Journal B</i> , 2015 , 88, 1	1.2	23
107	First-Principles Calculation of the Real-Space Order Parameter and Condensation Energy Density in Phonon-Mediated Superconductors. <i>Physical Review Letters</i> , 2015 , 115, 097002	7.4	23
106	Magnon spectrum of transition-metal oxides: Calculations including long-range magnetic interactions using the LSDA+U method. <i>Physical Review B</i> , 2011 , 84,	3.3	23
105	Gaussian approximations for the exchange-energy functional of current-carrying states: Applications to two-dimensional systems. <i>Physical Review A</i> , 2009 , 80,	2.6	23
104	Optimized effective potential method in current-spin-density-functional theory. <i>Physical Review A</i> , 2006 , 74,	2.6	23
103	Thomas-Fermi approach to diatomic systems. II. Correlation diagrams for N-N and Ne-Ne. <i>Physical Review A</i> , 1979 , 20, 1808-1815	2.6	23
102	A guided tour of time-dependent density functional theory 1998 , 116-146		22
101	Exchange-correlation orbital functionals in current-density functional theory: Application to a quantum dot in magnetic fields. <i>Physical Review B</i> , 2008 , 77,	3.3	22
100	On the Mass of Atoms in Molecules: Beyond the Born-Oppenheimer Approximation. <i>Physical Review X</i> , 2017 , 7,	9.1	21
99	Discontinuous functional for linear-response time-dependent density-functional theory: The exact-exchange kernel and approximate forms. <i>Physical Review A</i> , 2013 , 88,	2.6	21
98	Ensemble-HartreeHock scheme for excited states. The optimized effective potential method. <i>Physica B: Condensed Matter</i> , 2002 , 318, 328-332	2.8	21
97	Optimal control of strong-field ionization with time-dependent density-functional theory. <i>Physical Review A</i> , 2013 , 88,	2.6	20
96	Discontinuity of the chemical potential in reduced-density-matrix-functional theory for open-shell systems. <i>Physical Review A</i> , 2009 , 79,	2.6	20

(2015-2009)

95	Electronic exchange in quantum rings: Beyond the local-density approximation. <i>Physical Review B</i> , 2009 , 79,	3.3	20	
94	Chapter 10 Time-dependent transport phenomena. <i>Theoretical and Computational Chemistry</i> , 2007 , 17, 247-284		20	
93	Density-functional theory of the superconducting state. <i>International Journal of Quantum Chemistry</i> , 1991 , 40, 289-297	2.1	19	
92	Optical response of extended systems using time-dependent density functional theory. <i>Topics in Current Chemistry</i> , 2014 , 347, 235-57		18	
91	Multiplicity of solutions to GW-type approximations. <i>Physical Review B</i> , 2015 , 92,	3.3	18	
90	Theoretical investigation of optical conductivity in Ba(Fe1⊠Cox)2As2. <i>Physical Review B</i> , 2011 , 83,	3.3	18	
89	Theory of Dichroism in the Electromagnetic Response of Superconductors. <i>Physical Review Letters</i> , 1997 , 78, 3753-3756	7.4	18	
88	Approximate relativistic optimized potential method. <i>Physical Review A</i> , 1998 , 57, 138-148	2.6	18	
87	Relativistic theory of superconductivity. <i>Physics Letters, Section A: General, Atomic and Solid State Physics</i> , 1995 , 198, 261-266	2.3	18	
86	Electron-nuclear wave-packet dynamics through a conical intersection. <i>Journal of Chemical Physics</i> , 2017 , 146, 074304	3.9	17	
85	Density functional theory of electron transfer beyond the Born-Oppenheimer approximation: Case study of LiF. <i>Journal of Chemical Physics</i> , 2018 , 148, 084110	3.9	17	
84	Potential functionals versus density functionals. <i>Physical Review A</i> , 2013 , 88,	2.6	17	
83	Surface hopping in laser-driven molecular dynamics. <i>Physical Review A</i> , 2017 , 95,	2.6	17	
82	Reduced-density-matrix-functional theory at finite temperature: Theoretical foundations. <i>Physical Review A</i> , 2015 , 92,	2.6	17	
81	Conventional Quantum Chemical Correlation Energy Versus Density-Functional Correlation Energy. <i>ACS Symposium Series</i> , 1996 , 42-53	0.4	17	
80	Ab initio theory of superconductivity in a magnetic field. I. Spin density functional theory for superconductors and Eliashberg equations. <i>Physical Review B</i> , 2015 , 92,	3.3	16	
79	Asymptotic analysis of the Berry curvature in the E?e Jahn-Teller model. <i>Physical Review A</i> , 2017 , 96,	2.6	16	
78	Spectrum for nonmagnetic mott insulators from power functional within reduced density matrix functional theory. <i>Journal of Chemical Theory and Computation</i> , 2015 , 11, 4895-9	6.4	16	

77	Adiabatic Connection and the Kohn-Sham Variety of Potential-Functional Theory. <i>Journal of Chemical Theory and Computation</i> , 2009 , 5, 844-9	6.4	16
76	Phase-space analysis of double ionization. <i>Optics Express</i> , 2001 , 8, 411-6	3.3	16
75	Ab initio theory of superconductivity in a magnetic field. II. Numerical solution. <i>Physical Review B</i> , 2015 , 92,	3.3	15
74	Source-Free Exchange-Correlation Magnetic Fields in Density Functional Theory. <i>Journal of Chemical Theory and Computation</i> , 2018 , 14, 1247-1253	6.4	15
73	Enhanced excitonic effects in the energy loss spectra of LiF and Ar at large momentum transfer. <i>New Journal of Physics</i> , 2012 , 14, 053052	2.9	15
72	Measuring the kernel of time-dependent density functional theory with x-ray absorption spectroscopy of transition metals. <i>Physical Review Letters</i> , 2005 , 95, 253006	7.4	15
71	First-principles study of rare-earth-doped superconducting CaFe2As2. <i>Physical Review B</i> , 2012 , 86,	3.3	14
70	Ionization potentials and electron affinities from reduced-density-matrix functional theory. <i>Physical Review A</i> , 2012 , 85,	2.6	14
69	Electron localization function for two-dimensional systems. <i>Physical Review B</i> , 2008 , 77,	3.3	14
68	Density functional theory for superconductors. <i>International Journal of Quantum Chemistry</i> , 2004 , 99, 790-797	2.1	14
67	Relativistic framework for microscopic theories of superconductivity. II. The Pauli equation for superconductors. <i>Physical Review B</i> , 1999 , 59, 7155-7165	3.3	14
66	Thomas-Fermi potentials for quasimolecular collision processes. <i>Physics Letters, Section A: General, Atomic and Solid State Physics</i> , 1976 , 57, 131-134	2.3	14
65	Effect of discontinuities in Kohn-Sham-based chemical reactivity theory. <i>Journal of Chemical Physics</i> , 2012 , 136, 114102	3.9	12
64	Analysis of dichroism in the electromagnetic response of superconductors. <i>Physical Review B</i> , 1998 , 58, 473-489	3.3	12
63	Functionals of fractional form in variational scattering theory. <i>Physical Review A</i> , 1982 , 26, 3004-3007	2.6	12
62	Excitons in Organics Using Time-Dependent Density Functional Theory: PPV, Pentacene, and Picene. <i>Journal of Chemical Theory and Computation</i> , 2015 , 11, 1710-4	6.4	11
61	Optimal control theory for quantum-classical systems: Ehrenfest molecular dynamics based on time-dependent density-functional theory. <i>Journal of Physics A: Mathematical and Theoretical</i> , 2014 , 47, 025204	2	11
60	Magnetism in CeFeAsO1NFx and LaFeAsO1NFx from first principles. <i>Physical Review B</i> , 2009 , 80,	3.3	11

(2017-2006)

59	On the degeneracy of atomic states within exact-exchange (spin-) density functional theory. Journal of Chemical Physics, 2006 , 125, 084105	3.9	11
58	Relativistic gradient expansion of the kinetic energy density. <i>Physics Letters, Section A: General, Atomic and Solid State Physics</i> , 1981 , 81, 447-450	2.3	11
57	Electron-nuclear entanglement in the time-dependent molecular wavefunction. <i>Computational and Theoretical Chemistry</i> , 2019 , 1151, 99-106	2	10
56	Exact factorization-based density functional theory of electron-phonon systems. <i>Physical Review B</i> , 2019 , 99,	3.3	10
55	Generation of magnetic skyrmions by focused vortex laser pulses. <i>Journal of Applied Physics</i> , 2020 , 127, 073904	2.5	10
54	Doping induced metal-insulator phase transition in NiOE reduced density matrix functional theory perspective. <i>New Journal of Physics</i> , 2015 , 17, 093038	2.9	10
53	XMCD Analysis Beyond Standard Procedures. AIP Conference Proceedings, 2007,	O	10
52	Electromagnetic potential in Thomas-Fermi-Dirac atoms. <i>Physical Review A</i> , 1979 , 20, 44-47	2.6	10
51	Swift thermal steering of domain walls in ferromagnetic MnBi stripes. <i>Scientific Reports</i> , 2016 , 6, 24411	4.9	9
50	Multiband superconductivity in Pb, H under pressure and CaBeSi from ab initio calculations. <i>Journal of Physics Condensed Matter</i> , 2009 , 21, 164209	1.8	9
49	Orbital currents in the Colle-Salvetti correlation energy functional and the degeneracy problem. <i>Journal of Chemical Physics</i> , 2007 , 127, 124103	3.9	9
48	The 2021 Room-Temperature Superconductivity Roadmap. <i>Journal of Physics Condensed Matter</i> , 2021 ,	1.8	9
47	IR and NMR spectroscopic correlation of enterobactin by DFT. <i>Spectrochimica Acta - Part A: Molecular and Biomolecular Spectroscopy</i> , 2018 , 198, 264-277	4.4	8
46	Minimization procedure in reduced density matrix functional theory by means of an effective noninteracting system. <i>Computational and Theoretical Chemistry</i> , 2013 , 1003, 114-122	2	8
45	Acceleration of quantum optimal control theory algorithms with mixing strategies. <i>Physical Review E</i> , 2009 , 79, 056704	2.4	8
44	Zeros of the frequency-dependent linear density response. <i>Physical Review Letters</i> , 1988 , 61, 1518	7.4	8
43	Model Hamiltonian for strongly correlated systems: Systematic, self-consistent, and unique construction. <i>Physical Review B</i> , 2019 , 99,	3.3	7
42	Spin-density fluctuations and the fluctuation-dissipation theorem in 3d ferromagnetic metals. <i>Physical Review B</i> , 2017 , 96,	3.3	7

41	Noncollinear spin-spiral phase for the uniform electron gas within reduced-density-matrix-functional theory. <i>Physical Review B</i> , 2010 , 81,	3.3	7
40	Time-Dependent Optimized Effective Potential in the Linear Response Regime 1998, 177-197		7
39	Almost exact exchange at almost no computational cost in electronic structure. <i>Physical Review A</i> , 2015 , 92,	2.6	6
38	Static and dynamical susceptibility of LaO1⊠FxFeAs. <i>Physical Review B</i> , 2010 , 81,	3.3	6
37	Multicomponent Density-Functional Theory. <i>Lecture Notes in Physics</i> , 2006 , 93-106	0.8	6
36	Double-pole approximation in time-dependent density functional theory. <i>International Journal of Quantum Chemistry</i> , 2006 , 106, 2840-2847	2.1	6
35	Density Functional Theory of Normal and Superconducting Electron Liquids: Explicit Functionals via the Gradient Expansion. <i>Australian Journal of Physics</i> , 1996 , 49, 103		6
34	Extended Thomas-Fermi approach to diatomic systems. <i>Physics Letters, Section A: General, Atomic and Solid State Physics</i> , 1979 , 71, 49-53	2.3	6
33	Thomas-Fermi approach to diatomic quasimolecules: Correlation diagrams for neutral, heteronuclear systems. <i>Zeitschrift Fil Physik A</i> , 1980 , 298, 167-171		6
32	Solution of the Thomas-Fermi equation for triatomic systems. <i>Journal of Physics B: Atomic and Molecular Physics</i> , 1978 , 11, 3795-3802		6
31	Frequency-dependent linear response of superconducting systems. <i>International Journal of Quantum Chemistry</i> , 1995 , 56, 521-533	2.1	5
30	Multi-state impact parameter approximation for many particle excitations in atomic collisions; Total cross sections for Na-Ne and N-Ne. <i>Zeitschrift Fil Physik A</i> , 1978 , 285, 353-356		5
29	Accurate Formula for the Macroscopic Polarization of Strongly Correlated Materials. <i>Journal of Physical Chemistry Letters</i> , 2018 , 9, 7045-7051	6.4	5
28	Exchange-correlation approximations for reduced-density-matrix-functional theory at finite temperature: Capturing magnetic phase transitions in the homogeneous electron gas. <i>Physical Review A</i> , 2017 , 96,	2.6	4
27	Coherent quantum switch driven by optimized laser pulses. <i>Physica E: Low-Dimensional Systems and Nanostructures</i> , 2008 , 40, 1593-1595	3	4
26	Towards Time-Dependent Density-Functional Theory for Molecules in Strong Laser Pulses. <i>Progress in Theoretical Chemistry and Physics</i> , 2003 , 69-77	0.6	4
25	Comment on "Estimating Excitonic Effects in the Absorption Spectra of Solids: Problems and Insight from a Guided Iteration Scheme". <i>Physical Review Letters</i> , 2016 , 117, 159701	7.4	4
24	Many-body Green's function theory of electrons and nuclei beyond the Born-Oppenheimer approximation. <i>Physical Review B</i> , 2020 , 101,	3.3	3

23	42214 layered Fe-based superconductors: An ab initio study of their structural, magnetic, and electronic properties. <i>Physical Review B</i> , 2016 , 93,	3.3	3
22	L10 Stacked Binaries as Candidates for Hard-Magnets: FePt, MnAl and MnGa. <i>Annalen Der Physik</i> , 2017 , 529, 1600412	2.6	3
21	Publisher Note: Ab initio Description of High-Temperature Superconductivity in Dense Molecular Hydrogen [Phys. Rev. Lett. 100, 257001 (2008)]. <i>Physical Review Letters</i> , 2008 , 101,	7.4	3
20	Back to the Ground-State: Electron Gas. <i>Lecture Notes in Physics</i> , 2006 , 423-434	0.8	2
19	Molecules and clusters in strong laser fields 2007 , 485-617		2
18	Fock-Space Embedding Theory: Application to Strongly Correlated Topological Phases. <i>Physical Review Letters</i> , 2021 , 127, 116401	7.4	2
17	Geometric energy transfer in two-component systems <i>Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences</i> , 2022 , 380, 20200383	3	2
16	Ab initio study of doping effects in the 42214 compounds: A new family of layered iron-based superconductors. <i>Physical Review B</i> , 2017 , 95,	3.3	1
15	Direct evaluation of the isotope effect within the framework of density functional theory for superconductors. <i>Journal of Physics Condensed Matter</i> , 2019 , 31, 334001	1.8	1
14	Complete description of the magnetic ground state in spinel vanadates. <i>Physical Review B</i> , 2019 , 100,	3.3	1
13	Virial theorem and exact properties of density functionals for periodic systems. <i>Physical Review B</i> , 2014 , 89,	3.3	1
12	Transport properties of chrysazine-type molecules. <i>Theoretical Chemistry Accounts</i> , 2010 , 125, 535-541	1.9	1
11	Optimal control of charge transfer 2006 , 6325, 114		1
10	Ab-initio Computation of Superconducting Properties of Elemental Superconductors and MgB2. Journal of Superconductivity and Novel Magnetism, 2005 , 18, 649-652		1
9	Theory of relativistic effects in superconductors. <i>Physica C: Superconductivity and Its Applications</i> , 1999 , 317-318, 508-510	1.3	1
8	Solution of the extended Thomas-Fermi model for triatomic molecules. <i>Journal of Physics B: Atomic and Molecular Physics</i> , 1981 , 14, 2753-2759		1
7	Density Functional Theory of the Superconducting State. NATO ASI Series Series B: Physics, 1995, 431-46	50	1
6	Experimental and theoretical structural/spectroscopical correlation of enterobactin and catecholamide. <i>Data in Brief</i> , 2018 , 20, 2054-2064	1.2	1

1

Orbital Functionals in Static and Time-Dependent Density Functional Theory **1999**, 393-427

4	Energy, Momentum, and Angular Momentum Transfer between Electrons and Nuclei <i>Physical Review Letters</i> , 2022 , 128, 113001	7.4	1
3	Density functional theory for superconductors. <i>International Journal of Quantum Chemistry</i> , 2009 , 36, 611-615	2.1	
2	Rebuttal to the "Comment on Electromagnetic potential in Thomas-Fermi-Dirac atoms". <i>Physical Review A</i> , 1981 , 23, 2087-2087	2.6	

Controlling observables in normal, hybrid and Josephson junctions. *Molecular Physics*, **2018**, 116, 2449-2460