Lucia Reining

List of Publications by Year
in descending order

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68	9,311	87888 38	95266 68
papers	citations	h-index	g-index

70	70	70	6597
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Electronic excitations: density-functional versus many-body Greenâ€™s-function approaches. Reviews of Modern Physics, 2002, 74, 601-659.	45.6	3,375
2	Ab InitioCalculation of Excitonic Effects in the Optical Spectra of Semiconductors. Physical Review Letters, 1998, 80, 4510-4513.	7.8	803
3	Excitonic Effects in Solids Described by Time-Dependent Density-Functional Theory. Physical Review Letters, 2002, 88, 066404.	7.8	282
4	Ab InitioCalculations of the Quasiparticle and Absorption Spectra of Clusters: The Sodium Tetramer. Physical Review Letters, 1995, 75, 818-821.	7.8	265
5	Effect of self-consistency on quasiparticles in solids. Physical Review B, 2006, 74, .	3.2	230
6	Linear Plasmon Dispersion in Single-Wall Carbon Nanotubes and the Collective Excitation Spectrum of Graphene. Physical Review Letters, 2008, 100, 196803.	7.8	211
7	Time-dependent density-functional theory for extended systems. Reports on Progress in Physics, 2007, 70, 357-407.	20.1	201
8	Understanding Correlations in Vanadium Dioxide from First Principles. Physical Review Letters, 2007, 99, 266402.	7.8	198
9	Long-range contribution to the exchange-correlation kernel of time-dependent density functional theory. Physical Review B, 2004, 69, .	3.2	184
10	Ab initiostudy of the optical absorption and wave-vector-dependent dielectric response of graphite. Physical Review B, 2004, 69, .	3.2	175
11	Optical and Loss Spectra of Carbon Nanotubes: Depolarization Effects and Intertube Interactions. Physical Review Letters, 2003, 91, 046402.	7.8	174
12	Parameter-Free Calculation of Response Functions in Time-Dependent Density-Functional Theory. Physical Review Letters, 2003, 91, 056402.	7.8	159
13	Electronic structure and electron energy-loss spectroscopy ofZrO2zirconia. Physical Review B, 2004, 70, .	3.2	145
14	GWÎ“ approximation for electron self-energies in semiconductors and insulators. Physical Review B, 1994, 49, 8024-8028.	3.2	141
15	The GW approximation: content, successes and limitations. Wiley Interdisciplinary Reviews: Computational Molecular Science, 2018, 8, e1344.	14.6	138
16	Model dielectric function for semiconductors. Physical Review B, 1993, 47, 9892-9895.	3.2	137
17	Strong Interplay between Structure and Electronic Properties in<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mi>CuIn</mml:mi><mml:mo stretchy="false">(</mml:mo><mml:mi) Tj ETQq1 1 0.784314 rgBT /Overlock 10 Tf 50 102 Td (mathvariant="bold">S</mml:mi><mml:m Physical Review Letters, 2010, 104, 056401.	7.8	133
18	Many-Body Perturbation Theory Using the Density-Functional Concept: Beyond theGWApproximation. Physical Review Letters, 2005, 94, 186402.	7.8	126

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19	Valence Electron Photoemission Spectrum of Semiconductors:AbÂInitioDescription of Multiple Satellites. Physical Review Letters, 2011, 107, 166401.	7.8	120
20	Anisotropy and Interplane Interactions in the Dielectric Response of Graphite. Physical Review Letters, 2002, 89, 076402.	7.8	119
21	Exchange and Correlation Effects in Electronic Excitations ofCu2O. Physical Review Letters, 2006, 97, 267601.	7.8	114
22	Exciton Band Structure in Two-Dimensional Materials. Physical Review Letters, 2016, 116, 066803.	7.8	112
23	Local Field Effects in the Electron Energy Loss Spectra of RutileTiO2. Physical Review Letters, 2002, 88, 037601.	7.8	86
24	Ab initiocalculations of electronic excitations: Collapsing spectral sums. Physical Review B, 2010, 82, .	3.2	81
25	Nanometric Resolved Luminescence in h-BN Flakes: Excitons and Stacking Order. ACS Photonics, 2014, 1, 857-862.	6.6	80
26	First-principles study of the band structure and optical absorption of CuGaS<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:msub><mml:mrow /><mml:mn>2</mml:mn></mml:msub></mml:math>. Physical Review B, 2011, 84, .	3.2	74
27	Beyond the<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:mi>G</mml:mi><mml:mi>W</mml:mi></mml:mrow></mml:math>approximation: Combining correlation channels. Physical Review B, 2012, 85, .	3.2	69
28	TDDFT from molecules to solids: The role of long-range interactions. International Journal of Quantum Chemistry, 2005, 102, 684-701.	2.0	65
29	Quasiparticles and phonon satellites in spectral functions of semiconductors and insulators: Cumulants applied to the full first-principles theory and the FrÃ¶hlich polaron. Physical Review B, 2018, 97, .	3.2	60
30	Dynamical effects in electron spectroscopy. Journal of Chemical Physics, 2015, 143, 184109.	3.0	57
31	Estimating Excitonic Effects in the Absorption Spectra of Solids: Problems and Insight from a Guided Iteration Scheme. Physical Review Letters, 2015, 114, 146402.	7.8	56
32	Energy dependence of the exchange-correlation kernel of time-dependent density functional theory: A simple model for solids. Physical Review B, 2005, 72, .	3.2	54
33	Long-range behavior and frequency dependence of exchange-correlation kernels in solids. Physical Review B, 2003, 67, .	3.2	51
34	Dynamic structure factor and dielectric function of silicon for finite momentum transfer: Inelastic x-ray scattering experiments andab initiocalculations. Physical Review B, 2010, 81, .	3.2	50
35	Role of localized electrons in electron-hole interaction: The case of SrTiO<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:msub><mml:mrow /><mml:mn>3</mml:mn></mml:msub></mml:math>. Physical Review B, 2013, 87, .	3.2	41
36	Signatures of Short-Range Many-Body Effects in the Dielectric Function of Silicon for Finite Momentum Transfer. Physical Review Letters, 2006, 97, 237602.	7.8	40

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37	Ab initioelectronic stopping power of protons in bulk materials. Physical Review B, 2016, 93, .	3.2	40
38	Transforming Nonlocality into a Frequency Dependence: A Shortcut to Spectroscopy. Physical Review Letters, 2007, 99, 057401.	7.8	39
39	Multiple satellites in materials with complex plasmon spectra: From graphite to graphene. Physical Review B, 2014, 89, .	3.2	38
40	Dynamical response function in sodium and aluminum from time-dependent density-functional theory. Physical Review B, 2011, 84, .	3.2	37
41	Ab InitioCalculations of the Anisotropic Dielectric Tensor ofGaAs/AlAsSuperlattices. Physical Review Letters, 2002, 89, 216803.	7.8	35
42	Self-consistent Dyson equation and self-energy functionals: An analysis and illustration on the example of the Hubbard atom. Physical Review B, 2017, 96, .	3.2	33
43	Approximations for many-body Green's functions: insights from the fundamental equations. New Journal of Physics, 2012, 14, 013056.	2.9	31
44	Dynamical response function in sodium studied by inelastic x-ray scattering spectroscopy. Physical Review B, 2011, 84, .	3.2	27
45	Valence-band electronic structure of<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:msub><mml:mtext>V</mml:mtext><mml:mn>2</mml:mn></mml:msub><mml:msub><mml:mtext> Identification of V and O bands. Physical Review B, 2009, 80, .	3.2	25
46	Ab initioand semiempirical dielectric response of superlattices. Physical Review B, 2004, 70, .	3.2	24
47	Electron-hole interactions in correlated electron materials: Optical properties of vanadium dioxide from first principles. Physical Review B, 2015, 91, .	3.2	21
48	Cumulant Green's function calculations of plasmon satellites in bulk sodium: Influence of screening and the crystal environment. Physical Review B, 2018, 97, .	3.2	21
49	Photoemission spectra from reduced density matrices: The band gap in strongly correlated systems. Physical Review B, 2016, 94, .	3.2	20
50	Solution to the many-body problem in one point. New Journal of Physics, 2014, 16, 113025.	2.9	18
51	Effects of Low-Energy Excitations on Spectral Properties at Higher Binding Energy: The Metal-Insulator Transition ofVO2. Physical Review Letters, 2015, 114, 116402.	7.8	18
52	Unraveling intrinsic correlation effects with angle-resolved photoemission spectroscopy. Proceedings of the National Academy of Sciences of the United States of America, 2020, 117, 28596-28602.	7.1	18
53	Nonlocal density scheme for electronic-structure calculations. Physical Review B, 1999, 60, 11329-11335.	3.2	16
54	Nonlocal and Nonadiabatic Effects in the Charge-Density Response of Solids: A Time-Dependent Density-Functional Approach. Physical Review Letters, 2018, 120, 166402.	7.8	16

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55	Variations on the â€œexact factorizationâ€•theme. European Physical Journal B, 2018, 91, 1.	1.5	11
56	Spectroscopy of the Hubbard dimer: the spectral potential. European Physical Journal B, 2018, 91, 1.	1.5	11
57	Nonlinear response in the cumulant expansion for core-level photoemission. Physical Review Research, 2020, 2, .	3.6	9
58	Many-body perturbation theory and non-perturbative approaches: screened interaction as the key ingredient. Journal of Physics Condensed Matter, 2018, 30, 135602.	1.8	8
59	Correlation satellites in optical and loss spectra. Physical Review Research, 2020, 2, .	3.6	8
60	Excitons on a microscopic level: The mixed dynamic structure factor. Physical Review Research, 2019, 1, .	3.6	5
61	Insights into one-body density matrices using deep learning. Faraday Discussions, 2020, 224, 265-291.	3.2	3
62	Strategies to build functionals of the density, or functionals of Greenâ€™s functions: what can we learn?. Faraday Discussions, 2020, 224, 27-55.	3.2	3
63	First-principles study of excitons in optical spectra of silver chloride. Physical Review B, 2021, 104, .	3.2	3
64	New approaches to study excited states in density functional theory: general discussion. Faraday Discussions, 2020, 224, 483-508.	3.2	2
65	Delocalization of dark and bright excitons in flat-band materials and the optical properties of V2O5. Npj Computational Materials, 2022, 8, .	8.7	2
66	Connector theory for reusing model results to determine materials properties. Npj Computational Materials, 2022, 8, .	8.7	2
67	New density-functional approximations and beyond: general discussion. Faraday Discussions, 2020, 224, 166-200.	3.2	1
68	Design of auxiliary systems for spectroscopy. Faraday Discussions, 2020, 224, 424-447.	3.2	1