

Andrea Marini

List of Publications by Year in descending order

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144
papers

8,304
citations

46918

47
h-index

46693

89
g-index

148
all docs

148
docs citations

148
times ranked

8192
citing authors

#	ARTICLE	IF	CITATIONS
1	Coherence and de-coherence in the Time-Resolved ARPES of realistic materials: An ab-initio perspective. Journal of Electron Spectroscopy and Related Phenomena, 2022, 257, 147189.	0.8	4
2	Efficient hot-carrier dynamics in near-infrared photocatalytic metals. Physical Review B, 2022, 105, .	1.1	5
3	Spatial Dissipative Solitons in Graphene-Based Active Random Metamaterials. Physical Review Applied, 2022, 17, .	1.5	1
4	Optical parametric amplification by monolayer transition metal dichalcogenides. Nature Photonics, 2021, 15, 6-10.	15.6	74
5	Non-linear self-driven spectral tuning of Extreme Ultraviolet Femtosecond Pulses in monoatomic materials. Light: Science and Applications, 2021, 10, 92.	7.7	6
6	Spinorial formulation of the $G \cdot W$ -BSE equations and spin properties of excitons in two-dimensional transition metal dichalcogenides. Physical Review B, 2021, 103, .	1.1	16
7	Broadband Optical Parametric Amplification by 2D Semiconductors. , 2021, , .		0
8	Temporal Dynamics of Strongly Coupled Epsilon Near-Zero Plasmonic Systems. , 2021, , .		0
9	Subpicosecond metamagnetic phase transition in FeRh driven by non-equilibrium electron dynamics. Nature Communications, 2021, 12, 5088.	5.8	25
10	Time-Dependent Screening Explains the Ultrafast Excitonic Signal Rise in 2D Semiconductors. ACS Nano, 2021, 15, 1179-1185.	7.3	15
11	Temporal dynamics of strongly coupled epsilon near-zero plasmonic systems. Applied Physics Letters, 2021, 119, .	1.5	3
12	Free-carrier-induced nonlinear dynamics in hybrid graphene-based photonic waveguides. Physical Review A, 2021, 104, .	1.0	4
13	Electric Control of Spin-Orbit Coupling in Graphene-Based Nanostructures with Broken Rotational Symmetry. Laser and Photonics Reviews, 2020, 14, 2000214.	4.4	7
14	Engineering the optical reflectance of randomly arranged self-assembled semiconductor nanowires. AIP Conference Proceedings, 2020, , .	0.3	6
15	Observation of an Excitonic Mott Transition Through Ultrafast Core- <i>cum</i> -Conduction Photoemission Spectroscopy. Physical Review Letters, 2020, 125, 096401.	2.9	35
16	Reproducibility in G calculations for solids. Computer Physics Communications, 2020, 255, 107242.	3.0	36
17	Strongly Coupled Coherent Phonons in Single-Layer MoS_2 . ACS Nano, 2020, 14, 5700-5710.	7.3	44
18	Goos-Hänchen and Imbert-Fedorov shifts for epsilon-near-zero materials. Journal of Optics (United Kingdom), 2020, 22, 023001.	0.0	9

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19	Optical Parametric Amplification in 2D Semiconductors. , 2020, , .		0
20	Heat-induced soliton self-frequency redshift in the ultrafast nonlinear dynamics of active plasmonic waveguides. Physical Review A, 2019, 100, .	1.0	3
21	First-Principles Nonequilibrium Green's Function Approach to Ultrafast Charge Migration in Glycine. Journal of Chemical Theory and Computation, 2019, 15, 4526-4534.	2.3	17
22	Non-equilibrium Green's Functions. Physica Status Solidi (B): Basic Research, 2019, 256, 1900335.	0.7	2
23	Multipolar terahertz absorption spectroscopy ignited by graphene plasmons. Communications Physics, 2019, 2, .	2.0	6
24	Real-time observation of the intravalley spin-flip process in single-layer WS ₂ . EPJ Web of Conferences, 2019, 205, 05012.	0.1	0
25	Out-of-equilibrium electron dynamics of silver driven by ultrafast electromagnetic fields – a novel hydrodynamical approach. Faraday Discussions, 2019, 214, 235-243.	1.6	4
26	Photocarrier-induced band-gap renormalization and ultrafast charge dynamics in black phosphorus. 2D Materials, 2019, 6, 031001.	2.0	28
27	Many-body perturbation theory calculations using the yambo code. Journal of Physics Condensed Matter, 2019, 31, 325902.	0.7	269
28	Strong Modulations of Optical Reflectance in Tapered Core-Shell Nanowires. Materials, 2019, 12, 3572.	1.3	11
29	Strong Exciton-Coherent Phonon Coupling In Single-Layer MoS ₂ . , 2019, , .		1
30	Ultrafast Charge Migration in XUV Photoexcited Phenylalanine: A First-Principles Study Based on Real-Time Nonequilibrium Green's Functions. Journal of Physical Chemistry Letters, 2018, 9, 1353-1358.	2.1	36
31	Dynamical correlation effects in a weakly correlated material: Inelastic x-ray scattering and photoemission spectra of beryllium. Physical Review B, 2018, 97, .	1.1	9
32	Ultrafast nonlinear optical response of Dirac fermions in graphene. Nature Communications, 2018, 9, 1018.	5.8	110
33	Intravalley Spin-Flip Relaxation Dynamics in Single-Layer WS ₂ . Nano Letters, 2018, 18, 6882-6891.	4.5	82
34	Lasing and Amplification from Two-Dimensional Atom Arrays. Physical Review Letters, 2018, 121, 163602.	2.9	20
35	Optical harmonic generation in monolayer group-VI transition metal dichalcogenides. Physical Review B, 2018, 98, .	1.1	92
36	Plasmon-Enhanced Spin-Orbit Interaction of Light in Graphene. Laser and Photonics Reviews, 2018, 12, 1800140.	4.4	10

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37	Phase-matching-free parametric oscillators based on two-dimensional semiconductors. Light: Science and Applications, 2018, 7, 5.	7.7	26
38	Nonlinear optical effects of opening a gap in graphene. Physical Review B, 2018, 97, .	1.1	7
39	Functional approach to the electronic and bosonic dynamics of many-body systems perturbed with an arbitrary strong electron-boson interaction. Physical Review B, 2018, 98, .	1.1	9
40	Enhanced asymmetric transmission in hyperbolic epsilon-near-zero slabs. Journal of Optics (United Kingdom), 2018, 10, 081001.	1.0	8
41	An ab-initio approach to describe coherent and non-coherent exciton dynamics. European Physical Journal B, 2018, 91, 1.	0.6	21
42	Two-dimensional semiconductors: a novel platform for micron-sized phase-matching-free parametric oscillators. , 2018, , .		0
43	Efficient vortex generation in sub-wavelength near-zero index slabs. , 2018, , .		0
44	Plasmon-assisted high-harmonic generation in graphene. Nature Communications, 2017, 8, 14380.	5.8	128
45	Efficient Vortex Generation in Subwavelength Epsilon-Near-Zero Slabs. Physical Review Letters, 2017, 118, 104301.	2.9	39
46	Dynamical centrosymmetry breaking â€” A novel mechanism for second harmonic generation in graphene. Annals of Physics, 2017, 378, 24-32.	1.0	6
47	Phononic Crystal Waveguide Transducers for Nonlinear Elastic Wave Sensing. Scientific Reports, 2017, 7, 14712.	1.6	49
48	Ab Initio Calculations of Ultrashort Carrier Dynamics in Two-Dimensional Materials: Valley Depolarization in Single-Layer WSe ₂ . Nano Letters, 2017, 17, 4549-4555.	4.5	83
49	Self-Assembled InAs Nanowires as Optical Reflectors. Nanomaterials, 2017, 7, 400.	1.9	20
50	Enhanced nonlinear effects in pulse propagation through epsilon-near-zero media. Laser and Photonics Reviews, 2016, 10, 517-525.	4.4	53
51	Electronâ€™vibration coupling induced renormalization in the photoemission spectrum of diamondoids. Nature Communications, 2016, 7, 11327.	5.8	45
52	First-principles approach to excitons in time-resolved and angle-resolved photoemission spectra. Physical Review B, 2016, 94, .	1.1	56
53	Lamb shift of the Dirac cone of graphene. Europhysics Letters, 2016, 116, 43001.	0.7	0
54	Temperature-dependent excitonic effects in the optical properties of single-layer MoS ₂ . Physical Review B, 2016, 93, .	1.1	15

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55	Nonequilibrium optical properties in semiconductors from first principles: A combined theoretical and experimental study of bulk silicon. <i>Physical Review B</i> , 2016, 93, .	1.1	34
56	All-optical modulation in wavelength-sized epsilon-near-zero media. <i>Optics Letters</i> , 2016, 41, 3102.	1.7	8
57	Anomalous Temperature Dependence of the Band Gap in Black Phosphorus. <i>Nano Letters</i> , 2016, 16, 5095-5101.	4.5	87
58	Unified theory of quantized electrons, phonons, and photons out of equilibrium: A simplified approach based on the generalized Baym-Kadanoff ansatz. <i>Physical Review B</i> , 2016, 93, .	1.1	39
59	Electron-phonon scattering effects on electronic and optical properties of orthorhombic GeS. <i>Physical Review B</i> , 2016, 94, .	1.1	18
60	Photo-Induced Bandgap Renormalization Governs the Ultrafast Response of Single-Layer MoS ₂ . <i>ACS Nano</i> , 2016, 10, 1182-1188.	7.3	272
61	Nonlinear Optical Dynamics in Near-zero Index Media and in Graphene-based Random Meta-lasers. , 2016, , .		0
62	Nonequilibrium Bethe-Salpeter equation for transient photoabsorption spectroscopy. <i>Physical Review B</i> , 2015, 92, .	1.1	37
63	Many-body perturbation theory approach to the electron-phonon interaction with density-functional theory as a starting point. <i>Physical Review B</i> , 2015, 91, .	1.1	46
64	Complete collisions approximation to the Kadanoff-Baym equation: a first-principles implementation. <i>Journal of Physics: Conference Series</i> , 2015, 609, 012006.	0.3	16
65	Non-local soliton interactions in Raman-gas photonic crystal fibers. , 2015, , .		0
66	Molecular Sensing with Tunable Graphene Plasmons. <i>ACS Photonics</i> , 2015, 2, 876-882.	3.2	96
67	Ultra-fast carriers relaxation in bulk silicon following photo-excitation with a short and polarized laser pulse. <i>Europhysics Letters</i> , 2015, 110, 47004.	0.7	47
68	Loss-compensated nonlinear modes and symmetry breaking in amplifying metal-dielectric-metal plasmonic couplers. <i>Physical Review A</i> , 2015, 91, .	1.0	8
69	The Mechanism of Slow Hot-Hole Cooling in Lead-Iodide Perovskite: First-Principles Calculation on Carrier Lifetime from Electron-Phonon Interaction. <i>Nano Letters</i> , 2015, 15, 3103-3108.	4.5	140
70	Raman-induced temporal condensed matter physics in gas-filled photonic crystal fibers. <i>Optics Express</i> , 2015, 23, 11879.	1.7	13
71	Infrared spectroscopy with tunable graphene plasmons (Presentation Recording). , 2015, , .		1
72	Strong Raman-induced noninstantaneous soliton interactions in gas-filled photonic crystal fibers. <i>Optics Letters</i> , 2015, 40, 4058.	1.7	12

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73	Temperature dependence of the electronic structure of semiconductors and insulators. Journal of Chemical Physics, 2015, 143, 102813.	1.2	139
74	Temperature dependence of electronic eigenenergies in the adiabatic harmonic approximation. Physical Review B, 2014, 90, .	1.1	91
75	Raman-induced soliton oscillations and tunneling in gas-filled photonic crystal fibers. , 2014, , .		0
76	Free-carrier-driven spatiotemporal dynamics in amplifying silicon waveguides. Physical Review A, 2014, 89, .	1.0	1
77	Interaction between positive and negative frequencies in nonlinear optics. , 2014, , .		0
78	Shock-induced PT-symmetric potentials in gas-filled photonic-crystal fibers. Physical Review A, 2014, 89, .	1.0	12
79	Verification of first-principles codes: Comparison of total energies, phonon frequencies, electron-phonon coupling and zero-point motion correction to the gap between ABINIT and QE/Yambo. Computational Materials Science, 2014, 83, 341-348.	1.4	88
80	Optical Simulation of Neutrino Oscillations in Binary Waveguide Arrays. Physical Review Letters, 2014, 113, 150401.	2.9	17
81	Atomistic Quantum Plasmonics of Gold Nanowire Arrays. ACS Photonics, 2014, 1, 315-322.	3.2	13
82	Electron-electron and electron-phonon correlation effects on the finite-temperature electronic and optical properties of zinc-blende GaN. Physical Review B, 2014, 89, .	1.1	49
83	Self-frequency blueshift of dissipative solitons in silicon-based waveguides. Physical Review A, 2013, 87, .	1.0	15
84	Electronic excited states at ultrathin dielectric-metal interfaces. Physical Review B, 2013, 88, .	1.1	5
85	Effect of spin-orbit interaction on the optical spectra of single-layer, double-layer, and bulk MoS ₂ . Physical Review B, 2013, 88, .	1.1	382
86	Competition between the electronic and phonon-mediated scattering channels in the out-of-equilibrium carrier dynamics of semiconductors: an ab-initio approach. Journal of Physics: Conference Series, 2013, 427, 012003.	0.3	43
87	Ultrashort Self-Induced Transparency Plasmon Solitons. Physical Review Letters, 2013, 110, 243901.	2.9	22
88	Efficient Gate-tunable light-emitting device made of defective boron nitride nanotubes: from ultraviolet to the visible. Scientific Reports, 2013, 3, 2698.	1.6	22
89	Interaction between optical fields and their conjugates in nonlinear media. Optics Express, 2013, 21, 31239.	1.7	44
90	Polariton excitation in epsilon-near-zero slabs: Transient trapping of slow light. Physical Review A, 2013, 87, .	1.0	38

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91	Towards a microscopic description of the optical nonlinearities of gold-based plasmonic devices. , 2013, , .		0
92	Ultrafast interband nonlinear dynamics of surface plasmon polaritons in gold nanowires. , 2013, , .		0
93	Ultrafast interband nonlinear dynamics of surface plasmon polaritons in gold nanowires. , 2013, , .		0
94	Pseudopotential-based first-principles approach to the magneto-optical Kerr effect: From metals to the inclusion of local fields and excitonic effects. Physical Review B, 2012, 86, .	1.1	31
95	Zero point motion effect on the electronic properties of diamond, trans-polyacetylene and polyethylene. European Physical Journal B, 2012, 85, 1.	0.6	49
96	Speeding up the solution of the Bethe-Salpeter equation by a double-grid method and Wannier interpolation. Physical Review B, 2012, 86, .	1.1	42
97	Anomalous Aharonov-Bohm Gap Oscillations in Carbon Nanotubes. Nano Letters, 2011, 11, 4052-4057.	4.5	9
98	Coupling of excitons and defect states in boron-nitride nanostructures. Physical Review B, 2011, 83, .	1.1	177
99	Effect of the Quantum Zero-Point Atomic Motion on the Optical and Electronic Properties of Diamond and Trans-Polyacetylene. Physical Review Letters, 2011, 107, 255501.	2.9	109
100	Implementation and testing of Lanczos-based algorithms for Random-Phase Approximation eigenproblems. Computational Materials Science, 2011, 50, 2148-2156.	1.4	37
101	Stable spatial plasmon solitons in a dielectric-metal-dielectric geometry with gain and loss. Optics Express, 2011, 19, 6616.	1.7	62
102	Real-time approach to the optical properties of solids and nanostructures: Time-dependent Bethe-Salpeter equation. Physical Review B, 2011, 84, .	1.1	103
103	Anisotropic excitonic effects in the energy loss function of hexagonal boron nitride. Physical Review B, 2011, 83, .	1.1	34
104	Double excitations in correlated systems: A many-body approach. Journal of Chemical Physics, 2011, 134, 034115.	1.2	59
105	Test of long-range exchange-correlation kernels of time-dependent density functional theory at surfaces: Application to Si(111)2Å-1. Physical Review B, 2010, 82, .	1.1	16
106	Many-Body Effects in the Excitation Spectrum of a Defect in SiC. Physical Review Letters, 2010, 105, 026401.	2.9	66
107	yambo: An ab initio tool for excited state calculations. Computer Physics Communications, 2009, 180, 1392-1403.	3.0	927
108	Exciton-Plasmon States in Nanoscale Materials: Breakdown of the Tamm-Dancoff Approximation. Nano Letters, 2009, 9, 2820-2824.	4.5	128

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109	Optical properties of graphene nanoribbons: The role of many-body effects. Physical Review B, 2008, 77, .	1.1	235
110	Ab Initio Finite-Temperature Excitons. Physical Review Letters, 2008, 101, 106405.	2.9	164
111	Miniaturized bending-free solitons by restoring symmetry in periodically biased photorefractives. Optics Letters, 2008, 33, 2110.	1.7	7
112	Optical Saturation Driven by Exciton Confinement in Molecular Chains: A Time-Dependent Density-Functional Theory Approach. Physical Review Letters, 2008, 101, 133002.	2.9	47
113	Comment on "Huge Excitonic Effects in Layered Hexagonal Boron Nitride". Physical Review Letters, 2008, 100, 189701; discussion 189702.	2.9	64
114	Advanced Correlation Functionals: Application to Bulk Materials and Localized Systems. Journal of Physical Chemistry A, 2007, 111, 12458-12465.	1.1	35
115	Anisotropic gap of superconducting CaC ₆ : A first-principles density functional calculation. Physical Review B, 2007, 75, .	1.1	101
116	From Si Nanowires to Porous Silicon: The Role of Excitonic Effects. Physical Review Letters, 2007, 98, 036807.	2.9	151
117	Optical properties of one-dimensional graphene polymers: the case of polyphenanthrene. Physica Status Solidi (B): Basic Research, 2007, 244, 4124-4128.	0.7	6
118	Absorption of BN nanotubes under the influence of a perpendicular electric field. Physica Status Solidi (B): Basic Research, 2007, 244, 4288-4292.	0.7	22
119	Excitons in Boron Nitride Nanotubes: Dimensionality Effects. Physical Review Letters, 2006, 96, 126104.	2.9	343
120	Density functionals from many-body perturbation theory: The band gap for semiconductors and insulators. Journal of Chemical Physics, 2006, 124, 154108.	1.2	166
121	Exact Coulomb cutoff technique for supercell calculations. Physical Review B, 2006, 73, .	1.1	369
122	Approximate Functionals from Many-Body Perturbation Theory. Lecture Notes in Physics, 2006, , 161-180.	0.3	3
123	First-Principles Description of Correlation Effects in Layered Materials. Physical Review Letters, 2006, 96, 136404.	2.9	183
124	Effect of spatial nonlocality on the density functional band gap. Physical Review B, 2006, 74, .	1.1	68
125	Ab initio calculation of many-body effects on the EEL spectrum of the C(100) surface. Physical Review B, 2006, 74, .	1.1	13
126	Many-body perturbation theory combined with time dependent DFT: A new method for the calculation of the dielectric function of solids. Physica Status Solidi (B): Basic Research, 2005, 242, 2729-2736.	0.7	6

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127	Excitons in germanium nanowires: Quantum confinement, orientation, and anisotropy effects within a first-principles approach. <i>Physical Review B</i> , 2005, 72, .	1.1	93
128	Reflectance Anisotropy Spectra of the Diamond(100) $\hat{\sim}$ (2 \AA –1)Surface: Evidence of Strongly Bound Surface State Excitons. <i>Physical Review Letters</i> , 2005, 94, 087404.	2.9	34
129	The Bethe–Salpeter equation: a first-principles approach for calculating surface optical spectra. <i>Journal of Physics Condensed Matter</i> , 2004, 16, S4313-S4322.	0.7	28
130	Electron linewidths of wide-gap insulators: Excitonic effects inLiF. <i>Physical Review B</i> , 2004, 70, .	1.1	16
131	Optical absorption and electron energy loss spectra of carbon and boron nitride nanotubes: a first-principles approach. <i>Applied Physics A: Materials Science and Processing</i> , 2004, 78, 1157-1167.	1.1	105
132	Accurate band mapping via photoemission from thin films. <i>Physical Review B</i> , 2004, 69, .	1.1	6
133	Dynamical Excitonic Effects in Metals and Semiconductors. <i>Physical Review Letters</i> , 2003, 91, 176402.	2.9	99
134	Ab initio calculation of the exchange-correlation kernel in extended systems. <i>Physical Review B</i> , 2003, 68, .	1.1	80
135	Bound Excitons in Time-Dependent Density-Functional Theory: Optical and Energy-Loss Spectra. <i>Physical Review Letters</i> , 2003, 91, 256402.	2.9	151
136	Quasiparticle band-structure effects on the hole lifetimes of copper within theGWapproximation. <i>Physical Review B</i> , 2002, 66, .	1.1	32
137	First-principles calculation of the plasmon resonance and of the reflectance spectrum of silver in theGWapproximation. <i>Physical Review B</i> , 2002, 66, .	1.1	76
138	One, two and three-body channels of the core–valence–valence Auger photoelectron coincidence spectra of early transition metals. <i>Journal of Electron Spectroscopy and Related Phenomena</i> , 2002, 127, 17-28.	0.8	6
139	Quasiparticle Electronic Structure of Copper in theGWapproximation. <i>Physical Review Letters</i> , 2001, 88, 016403.	2.9	149
140	Plane-wave DFT-LDA calculation of the electronic structure and absorption spectrum of copper. <i>Physical Review B</i> , 2001, 64, .	1.1	57
141	Auger spectroscopy of strongly correlated systems: present status and future trends. <i>Journal of Electron Spectroscopy and Related Phenomena</i> , 2001, 117-118, 41-55.	0.8	25
142	All-Electron versus Pseudopotential Calculation of Optical Properties: The Case of GaAs. <i>Physica Status Solidi A</i> , 2001, 184, 101-104.	1.7	5
143	Theory for Modeling the Optical Properties of Surfaces. <i>Physica Status Solidi A</i> , 2001, 188, 1233-1242.	1.7	10
144	Three-body and one-body channels of the Auger core-valence-valence decay: A simplified approach. <i>Physical Review B</i> , 1999, 60, 11391-11403.	1.1	8