

# Roberto Rosati

## List of Publications by Year in descending order

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Version: 2024-02-01

26  
papers

491  
citations

758635

12  
h-index

676716

22  
g-index

26  
all docs

26  
docs citations

26  
times ranked

362  
citing authors

#	ARTICLE	IF	CITATIONS
1	Exciton diffusion in monolayer semiconductors with suppressed disorder. Physical Review B, 2020, 101, .	1.1	74
2	Exciton Propagation and Halo Formation in Two-Dimensional Materials. Nano Letters, 2019, 19, 7317-7323.	4.5	64
3	Wigner-function formalism applied to semiconductor quantum devices: Failure of the conventional boundary condition scheme. Physical Review B, 2013, 88, .	1.1	54
4	Nonclassical Exciton Diffusion in Monolayer $WS_2$ . Physical Review Letters, 2021, 127, 076801.	2.9	40
5	Derivation of nonlinear single-particle equations via many-body Lindblad superoperators: A density-matrix approach. Physical Review B, 2014, 90, .	1.1	38
6	Negative effective excitonic diffusion in monolayer transition metal dichalcogenides. Nanoscale, 2020, 12, 356-363.	2.8	37
7	Dark exciton anti-funneling in atomically thin semiconductors. Nature Communications, 2021, 12, 7221.	5.8	35
8	Strain-dependent exciton diffusion in transition metal dichalcogenides. 2D Materials, 2021, 8, 015030.	2.0	21
9	Scattering nonlocality in quantum charge transport: Application to semiconductor nanostructures. Physical Review B, 2014, 89, .	1.1	20
10	Temporal Evolution of Low-Temperature Phonon Sidebands in Transition Metal Dichalcogenides. ACS Photonics, 2020, 7, 2756-2764.	3.2	20
11	Electron-phonon coupling in metallic carbon nanotubes: Dispersionless electron propagation despite dissipation. Physical Review B, 2015, 92, .	1.1	13
12	Microscopic modeling of scattering quantum non-locality in semiconductor nanostructures. Applied Physics Letters, 2013, 103, 113105.	1.5	12
13	Lindblad approach to spatiotemporal quantum dynamics of phonon-induced carrier capture processes. Physical Review B, 2017, 95, .	1.1	12
14	Dispersionless propagation of electron wavepackets in single-walled carbon nanotubes. Applied Physics Letters, 2015, 106, 243101.	1.5	10
15	Spatial control of carrier capture in two-dimensional materials: Beyond energy selection rules. Physical Review B, 2018, 98, .	1.1	9
16	Quantum diffusion due to scattering non-locality in nanoscale semiconductors. Europhysics Letters, 2014, 105, 17010.	0.7	6
17	Non-equilibrium diffusion of dark excitons in atomically thin semiconductors. Nanoscale, 2021, 13, 19966-19972.	2.8	6
18	Spatio-Temporal Dynamics of Carrier Capture Processes: Simulation of Optical Signals. Acta Physica Polonica A, 2017, 132, 372-375.	0.2	5

#	ARTICLE	IF	CITATIONS
19	Spatiotemporal dynamics of Coulomb-correlated carriers in semiconductors. Physical Review B, 2019, 99, .	1.1	4
20	Microscopic modeling of exciton-polariton diffusion coefficients in atomically thin semiconductors. Physical Review Materials, 2022, 6, .	0.9	4
21	Effective detection of spatio-temporal carrier dynamics by carrier capture. Journal of Physics Condensed Matter, 2019, 31, 28LT01.	0.7	3
22	Electron Dynamics in a Two-Dimensional Nanobubble: A Two-Level System Based on Spatial Density. Nano Letters, 2021, 21, 9896-9902.	4.5	3
23	Microscopic treatment of energy dissipation and decoherence via many-body Lindblad superoperators. Journal of Physics: Conference Series, 2015, 647, 012027.	0.3	1
24	Microscopic modeling of quantum devices at high carrier densities via Lindblad-type scattering superoperators. , 2014, , .		0
25	Phonon-induced quantum diffusion in semiconductors. , 2014, , .		0
26	Phonon-induced quantum diffusion in Carbon-based materials. Journal of Physics: Conference Series, 2015, 647, 012045.	0.3	0