

# Simone Fratini

## List of Publications by Year in descending order

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82  
papers

4,087  
citations

159585

30  
h-index

114465

63  
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82  
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82  
docs citations

82  
times ranked

4672  
citing authors

#	ARTICLE	IF	CITATIONS
1	Doping-induced Dielectric Catastrophe Prompts Free-Carrier Release in Organic Semiconductors. <i>Advanced Materials</i> , 2022, 34, e2105376.	21.0	9
2	Structural and Dynamic Disorder, Not Ionic Trapping, Controls Charge Transport in Highly Doped Conducting Polymers. <i>Journal of the American Chemical Society</i> , 2022, 144, 3005-3019.	13.7	45
3	Rise and fall of Landau's quasiparticles while approaching the Mott transition. <i>Nature Communications</i> , 2021, 12, 1571.	12.8	25
4	Pseudogap metal induced by long-range Coulomb interactions. <i>Physical Review B</i> , 2021, 103, .	3.2	6
5	Displaced Drude peak and bad metal from the interaction with slow fluctuations. <i>SciPost Physics</i> , 2021, 11, .	4.9	12
6	Charge transport in high-mobility conjugated polymers and molecular semiconductors. <i>Nature Materials</i> , 2020, 19, 491-502.	27.5	485
7	Dynamical localization corrections to band transport. <i>Physical Review Research</i> , 2020, 2, .	3.6	24
8	Chasing the "Killer" Phonon Mode for the Rational Design of Low-Disorder, High-Mobility Molecular Semiconductors. <i>Advanced Materials</i> , 2019, 31, e1902407.	21.0	126
9	Electronic Structure, Electron-Phonon Coupling, and Charge Transport in Crystalline Rubrene Under Mechanical Strain. <i>Journal of Physical Chemistry C</i> , 2019, 123, 15897-15907.	3.1	22
10	Practical Computation of the Charge Mobility in Molecular Semiconductors Using Transient Localization Theory. <i>Journal of Physical Chemistry C</i> , 2019, 123, 6989-6997.	3.1	40
11	Inhomogeneous dynamical mean-field theory of the small polaron problem. <i>Journal of Physics Condensed Matter</i> , 2018, 30, 465902.	1.8	3
12	The origin of Mooij correlations in disordered metals. <i>Npj Quantum Materials</i> , 2018, 3, .	5.2	23
13	Quantum spin liquids unveil the genuine Mott state. <i>Nature Materials</i> , 2018, 17, 773-777.	27.5	61
14	Low-Energy Excitations in Quantum Spin Liquids Identified by Optical Spectroscopy. <i>Physical Review Letters</i> , 2018, 121, 056402.	7.8	13
15	Disorder-Driven Metal-Insulator Transitions in Deformable Lattices. <i>Physical Review Letters</i> , 2017, 118, 036602.	7.8	35
16	Negative Isotope Effect on Field-Effect Hole Transport in Fully Substituted $^{13}\text{C}$ -Rubrene. <i>Advanced Electronic Materials</i> , 2017, 3, 1700018.	5.1	32
17	A map of high-mobility molecular semiconductors. <i>Nature Materials</i> , 2017, 16, 998-1002.	27.5	182
18	The Transient Localization Scenario for Charge Transport in Crystalline Organic Materials. <i>Advanced Functional Materials</i> , 2016, 26, 2292-2315.	14.9	284

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19	Avoiding Stripe Order: Emergence of the Supercooled Electron Liquid. Journal of Superconductivity and Novel Magnetism, 2016, 29, 601-604.	1.8	7
20	Glassy Dynamics in Geometrically Frustrated Coulomb Liquids without Disorder. Physical Review Letters, 2015, 115, 025701.	7.8	55
21	Multiorbital kinetic effects on charge ordering of frustrated electrons on the triangular lattice. Physical Review B, 2015, 91, .	3.2	5
22	Impact of quantized vibrations on the efficiency of interfacial charge separation in photovoltaic devices. Physical Review B, 2015, 91, .	3.2	22
23	Pinball liquid phase from Hund's coupling in frustrated transition-metal oxides. Physical Review B, 2015, 91, .	3.2	6
24	Carrier dynamics of rubrene single-crystals revealed by transient broadband terahertz spectroscopy. Applied Physics Letters, 2014, 105, .	3.3	17
25	Phenomenological model for charge dynamics and optical response of disordered systems: Application to organic semiconductors. Physical Review B, 2014, 89, .	3.2	30
26	Tailoring the Molecular Structure to Suppress Extrinsic Disorder in Organic Transistors. Advanced Materials, 2014, 26, 1254-1260.	21.0	45
27	Importance of Spin-Orbit Interaction for the Electron Spin Relaxation in Organic Semiconductors. Physical Review Letters, 2013, 110, 216602.	7.8	62
28	Emergent Heavy Fermion Behavior at the Wigner-Mott Transition. Physical Review Letters, 2013, 111, 126403.	7.8	20
29	Anisotropic intrinsic spin relaxation in graphene due to flexural distortions. Physical Review B, 2013, 88, .	3.2	30
30	Electronic transport and quantum localization effects in organic semiconductors. Physical Review B, 2012, 86, .	3.2	61
31	Charge Order at the Frontier between the Molecular and Solid States in $\text{Ba}_3\text{NaRu}_2\text{O}_{10}$ . Physical Review Letters, 2012, 108, 217205.	7.8	20
32	Molecular Fingerprints in the Electronic Properties of Crystalline Organic Semiconductors: From Experiment to Theory. Physical Review Letters, 2012, 108, 256401.	7.8	57
33	Band Dispersion and Electronic Lifetimes in Crystalline Organic Semiconductors. Physical Review Letters, 2011, 106, 166403.	7.8	52
34	Importance of intramolecular electron spin relaxation in small molecule semiconductors. Physical Review B, 2011, 84, .	3.2	20
35	Geometrical frustration effects on charge-driven quantum phase transitions. Physical Review B, 2011, 84, .	3.2	22
36	Transient localization in crystalline organic semiconductors. Physical Review B, 2011, 83, .	3.2	117

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37	Optical conductivity of spin/lattice polarons in underdoped copper oxides. Journal of Electron Spectroscopy and Related Phenomena, 2010, 181, 28-30.	1.7	0
38	Quantum Critical Behavior of Electrons at the Edge of Charge Order. Physical Review Letters, 2010, 105, 036405.	7.8	30
39	Interface polaron formation in organic field-effect transistors. Physical Review B, 2010, 82, .	3.2	3
40	Polaronic signatures in the optical properties of the electron-doped cuprate superconductor $\text{Nd}_{2-x}\text{Ce}_x\text{CuO}_4$ . Physical Review B, 2009, 79, .	3.2	12
41	Hopping dynamics of interacting polarons. Physical Review B, 2009, 79, .	3.2	16
42	Bandlike Motion and Mobility Saturation in Organic Molecular Semiconductors. Physical Review Letters, 2009, 103, 266601.	7.8	166
43	Unconventional metallic conduction in two-dimensional Hubbard-Wigner lattices. Physical Review B, 2009, 80, .	3.2	14
44	Electron-phonon and electron-electron interactions in organic field effect transistors. Journal of Physics and Chemistry of Solids, 2008, 69, 2195-2198.	4.0	14
45	Tuning electron-phonon and Coulomb interactions in organic field effect transistors. Physica Status Solidi C: Current Topics in Solid State Physics, 2008, 5, 718-721.	0.8	5
46	Optical properties of lattice/magnetic small polarons from DMFT. Journal of Physics and Chemistry of Solids, 2008, 69, 2164-2167.	4.0	1
47	Optical properties of the Holstein-Hubbard model from dynamical mean-field theory. Physica B: Condensed Matter, 2008, 403, 1181-1183.	2.7	0
48	Substrate-limited electron dynamics in graphene. Physical Review B, 2008, 77, .	3.2	419
49	Electrostatic interactions between graphene layers and their environment. Physical Review B, 2008, 77, .	3.2	125
50	Signatures of polaronic charge ordering in optical and dc conductivity using dynamical mean field theory. Physical Review B, 2008, 77, .	3.2	9
51	Current saturation and Coulomb interactions in organic single-crystal transistors. New Journal of Physics, 2008, 10, 033031.	2.9	47
52	Optical properties of lattice/spin polarons in underdoped cuprates. Journal of Physics: Conference Series, 2008, 108, 012021.	0.4	0
53	Polaronic features in the optical properties of the Holstein-Hubbard model. Physical Review B, 2007, 76, .	3.2	25
54	Optical and spectral properties of quantum domain walls in the generalized Wigner lattice. Physical Review B, 2007, 75, .	3.2	8

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55	Optical properties of small polarons from dynamical mean-field theory. <i>Physical Review B</i> , 2006, 74, .	3.2	38
56	Tunable Fröhlich polarons in organic single-crystal transistors. <i>Nature Materials</i> , 2006, 5, 982-986.	27.5	529
57	Enhancement of Wigner crystallization in quasi-low-dimensional solids. <i>Physical Review B</i> , 2006, 73, .	3.2	5
58	Fate of the Wigner crystal on the square lattice. <i>European Physical Journal Special Topics</i> , 2005, 131, 247-250.	0.2	2
59	Spectral properties and isotope effect in strongly interacting systems: Mott-Hubbard insulator versus polaronic semiconductor. <i>Physical Review B</i> , 2005, 72, .	3.2	24
60	Wigner crystallization in low dimensional materials. <i>European Physical Journal Special Topics</i> , 2005, 131, 277-280.	0.2	1
61	Magnetoresistance of itinerant electrons interacting with local spins. <i>Physical Review B</i> , 2004, 70, .	3.2	1
62	On the stability of hole crystals in layered cuprates. <i>European Physical Journal B</i> , 2004, 42, 305-308.	1.5	2
63	Incipient quantum melting of the one-dimensional Wigner lattice. <i>Synthetic Metals</i> , 2004, 141, 193-196.	3.9	7
64	Dynamical Mean-Field Theory of Transport of Small Polarons. <i>Physical Review Letters</i> , 2003, 91, 256403.	7.8	93
65	Charge and spin order in one-dimensional electron systems with long-range Coulomb interactions. <i>Physical Review B</i> , 2003, 68, .	3.2	33
66	Electronic susceptibilities in systems with anisotropic Fermi surfaces. <i>Physical Review B</i> , 2002, 66, .	3.2	7
67	Anomalous Optical Absorption in the Normal State of Overdoped Cuprates Near the Charge-Ordering Instability. <i>Physical Review Letters</i> , 2002, 88, 147001.	7.8	30
68	Energy radiation of moving cracks. <i>Physical Review B</i> , 2002, 66, .	3.2	10
69	Polarization catastrophe in doped cuprates and metal-ammonia solutions. Metal-to-superconductor transition versus phase separation. <i>European Physical Journal Special Topics</i> , 2002, 12, 227-230.	0.2	1
70	Polarization catastrophe in the polaronic Wigner crystal. <i>European Physical Journal B</i> , 2002, 29, 41-49.	1.5	24
71	Variational wave function for generalized Wigner lattices in one dimension. <i>European Physical Journal Special Topics</i> , 2002, 12, 69-72.	0.2	1
72	Jahn-Teller, charge and magnetic ordering in half-doped manganese oxides. <i>European Physical Journal B</i> , 2001, 22, 157-165.	1.5	16

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73	Optical absorption from a nondegenerate polaron gas. Physical Review B, 2001, 63, .	3.2	30
74	Is the quantum melting of a Polaron Wigner Crystal an insulator-to-superconductor transition?. Physica C: Superconductivity and Its Applications, 2000, 341-348, 229-232.	1.2	16
75	Spectral properties of a non-degenerate polaron gas. Physica A: Statistical Mechanics and Its Applications, 2000, 280, 193-198.	2.6	0
76	OPTICAL CONDUCTIVITY OF THE HOLSTEIN MODEL AT LOW DENSITY. International Journal of Modern Physics B, 2000, 14, 3020-3025.	2.0	1
77	Melting of a Wigner crystal in an ionic dielectric. European Physical Journal B, 2000, 14, 99-113.	1.5	27
78	Quantum and/or thermal melting of a polaron Wigner crystal. European Physical Journal Special Topics, 1999, 09, Pr10-259-Pr10-261.	0.2	1
79	Polaron Crystallization and Melting: Effects of the Long-Range Coulomb Forces. Modern Physics Letters B, 1998, 12, 1003-1012.	1.9	17
80	Polaron Crystallization and the Metal-Insulator Transition. International Journal of Modern Physics B, 1998, 12, 3131-3136.	2.0	11
81	Polaron Dissociation at the Insulator-to-Metal Transition. Modern Physics Letters B, 1997, 11, 1303-1312.	1.9	9
82	Dynamical mean-field theory of the small polaron. Physical Review B, 1997, 56, 4494-4512.	3.2	163