Vincenzo Lordi

List of Publications by Year in Descending Order

87 papers	2,876 citations	24 h-index	52 g-index
97 ext. papers	3,185 ext. citations	4.1 avg, IF	5.21 L-index

#	Paper	IF	Citations
87	Role of ripples in altering the electronic and chemical properties of graphene.. *Journal of Chemical Physics*, **2022**, 156, 054708	3.9	1
86	Advances and opportunities in materials science for scalable quantum computing. *MRS Bulletin*, **2021**, 46, 589-595	3.2	0
85	Analysis of defects in In2O3:H synthesized in presence of water vapor and hydrogen gas mixture. *Journal of Applied Physics*, **2021**, 129, 045102	2.5	1
84	Behavior of Na and RbF-Treated CdS/Cu(In,Ga)Se2 Solar Cells with Stress Testing under Heat, Light, and Junction Bias. *Physica Status Solidi - Rapid Research Letters*, **2021**, 15, 2000530	2.5	
83	Probing Charge Dynamics in Diamond with an Individual Color Center. *Nano Letters*, **2021**, 21, 6960-6966	11.5	3
82	Limits on the Existence of sub-MeV Sterile Neutrinos from the Decay of ^{7}Be in Superconducting Quantum Sensors. *Physical Review Letters*, **2021**, 126, 021803	7.4	6
81	Thermodynamic Modeling of the Al-Ce-Cu-Mg-Si System and Its Application to Aluminum-Cerium Alloy Design. *Journal of Phase Equilibria and Diffusion*, **2020**, 41, 764-783	1	0
80	Materials science for quantum information science and technology. *MRS Bulletin*, **2020**, 45, 485-497	3.2	3
79	Delving into dynamic effects. *Nature Chemistry*, **2020**, 12, 225-226	17.6	
78	Quantifying Large Lattice Relaxations in Photovoltaic Devices. *Physical Review Applied*, **2020**, 13,	4.3	3
77	Prospects for n-type doping of (AlxGa1□)2O3 alloys. *Applied Physics Letters*, **2020**, 116, 172104	3.4	26
76	A density-functional theory study of the Al/AlOx/Al tunnel junction. *Journal of Applied Physics*, **2020**, 128, 155102	2.5	4
75	Intercalation of Lithium into Graphite: Insights from First-Principles Simulations. *Journal of Physical Chemistry C*, **2020**, 124, 21985-21992	3.8	4
74	The role of water vapor during the synthesis of hydrogen doped In 2 O 3. *Applied Physics Letters*, **2020**, 117, 062103	3.4	3
73	van der Waals-corrected density functional study of electric field noise heating in ion traps caused by electrode surface adsorbates. *New Journal of Physics*, **2019**, 21, 053043	2.9	3
72	Electric-field noise from thermally activated fluctuators in a surface ion trap. *Physical Review A*, **2019**, 99,	2.6	11
71	The role of oxygen doping on elemental intermixing at the PVD-CdS/Cu (InGa)Se2 heterojunction. *Progress in Photovoltaics: Research and Applications*, **2019**, 27, 255-263	6.8	7

70	Assessing the role of hydrogen in Fermi-level pinning in chalcopyrite and kesterite solar absorbers from first-principles calculations. *Journal of Applied Physics*, **2018**, 123, 161408	2.5	8
69	TopoMS: Comprehensive topological exploration for molecular and condensed-matter systems. *Journal of Computational Chemistry*, **2018**, 39, 936-952	3.5	16
68	First principles study of the structural, electronic, and optical properties of Sn2+-doped ZnO–P2O5 glasses. *Journal of Non-Crystalline Solids*, **2018**, 492, 108-114	3.9	2
67	Perfect Strain Relaxation in Metamorphic Epitaxial Aluminum on Silicon through Primary and Secondary Interface Misfit Dislocation Arrays. *ACS Nano*, **2018**, 12, 6843-6850	16.7	12
66	Electronic structure and surface properties of MgB2(0001) upon oxygen adsorption. *Physical Review B*, **2018**, 97,	3.3	4
65	Water ingress mapping in photovoltaic module packaging materials **2018**,		2
64	**2018**,		2
63	Anomalous diffusion along metal/ceramic interfaces. *Nature Communications*, **2018**, 9, 5251	17.4	33
62	Incident wavelength and polarization dependence of spectral shifts in □GaO UV photoluminescence. *Scientific Reports*, **2018**, 8, 18075	4.9	34
61	Thermodynamics of SmCo5 compound doped with Fe and Ni: An ab initio study. *Journal of Alloys and Compounds*, **2018**, 765, 659-663	5.7	21
60	Cd doping at PVD-CdS/CuInGaSe2 heterojunctions. *Solar Energy Materials and Solar Cells*, **2017**, 164, 128-134	6.4	15
59	Magnetic stability of oxygen defects on the SiO2 surface. *AIP Advances*, **2017**, 7, 025110	1.5	8
58	Stability of CdZnOS Quaternary Alloys Assessed with First-Principles Calculations. *ACS Applied Materials & Interfaces*, **2017**, 9, 5673-5677	9.5	4
57	A comparison of point defects in Cd1−xZnxTe1−ySey crystals grown by Bridgman and traveling heater methods. *Journal of Applied Physics*, **2017**, 121, 125705	2.5	23
56	Complex Ion Dynamics in Carbonate Lithium-Ion Battery Electrolytes. *Journal of Physical Chemistry C*, **2017**, 121, 6589-6595	3.8	14
55	Descriptor-Based Approach for the Prediction of Cation Vacancy Formation Energies and Transition Levels. *Journal of Physical Chemistry Letters*, **2017**, 8, 5059-5063	6.4	17
54	Solvation and Dynamics of Sodium and Potassium in Ethylene Carbonate from ab Initio Molecular Dynamics Simulations. *Journal of Physical Chemistry C*, **2017**, 121, 21913-21920	3.8	99
53	Comment on "New Ground-State Crystal Structure of Elemental Boron". *Physical Review Letters*, **2017**, 118, 159601	7.4	3

52	Exploring Cd-Zn-O-S alloys for improved buffer layers in thin-film photovoltaics. *Physical Review Materials*, **2017**, 1,	3.2	4
51	Intermixing and Formation of Cu-Rich Secondary Phases at Sputtered CdS/CuInGaSe2 Heterojunctions. *IEEE Journal of Photovoltaics*, **2016**, 6, 1308-1315	3.7	5
50	First-principles study of atomic and electronic structures of 60? perfect and 30?/90? partial glide dislocations in CdTe. *Physical Review B*, **2016**, 93,	3.3	13
49	Understanding Lithium Solvation and Diffusion through Topological Analysis of First-Principles Molecular Dynamics **2016**,		2
48	First principles calculations of point defect diffusion in CdS buffer layers: Implications for Cu(In,Ga)(Se,S)2 and Cu2ZnSn(Se,S)4-based thin-film photovoltaics. *Journal of Applied Physics*, **2016**, 119, 025703	2.5	15
47	Amorphous Phase Change Materials: Structure, Stability and Relation with Their Crystalline Phase. *Springer Series in Materials Science*, **2015**, 485-509	0.9	2
46	Hole traps in sodium silicate: First-principles calculations of the mobility edge. *Journal of Non-Crystalline Solids*, **2015**, 430, 9-15	3.9	5
45	Cu rich domains and secondary phases in PVD-CdS / PVD-CuIn1□GaxSe2 heterojunctions **2015**,		2
44	Effect of chlorination on the TlBr band edges for improved room temperature radiation detectors. *Physica Status Solidi (B): Basic Research*, **2015**, 252, 1266-1271	1.3	4
43	Lithium ion solvation and diffusion in bulk organic electrolytes from first-principles and classical reactive molecular dynamics. *Journal of Physical Chemistry B*, **2015**, 119, 1535-45	3.4	123
42	Electron correlation and relativity of the 5f electrons in the U□r alloy system. *Journal of Nuclear Materials*, **2014**, 444, 356-358	3.3	29
41	Identification of the local sources of paramagnetic noise in superconducting qubit devices fabricated on □Al2O3 substrates using density-functional calculations. *Physical Review Letters*, **2014**, 112, 017001	7.4	24
40	Intermixing at the absorber-buffer layer interface in thin-film solar cells: The electronic effects of point defects in Cu(In,Ga)(Se,S)2 and Cu2ZnSn(Se,S)4 devices. *Journal of Applied Physics*, **2014**, 116, 063505	2.5	24
39	Electronic structure and defect properties of B6O from hybrid functional and many-body perturbation theory calculations: A possible ambipolar transparent conductor. *Physical Review B*, **2014**, 90,	3.3	25
38	Ground-state properties of rare-earth metals: an evaluation of density-functional theory. *Journal of Physics Condensed Matter*, **2014**, 26, 416001	1.8	25
37	Microstructural and Chemical Investigation of PVD-CdS/PVD- $hbox{CuIn}_{hbox{1-x}} {hbox{Ga}}_{hbox{x}} {hbox{Se}}_{hbox{2}}$ Heterojunctions: A Transmission Electron Microscopy Study. *IEEE Journal of Photovoltaics*, **2014**, 4, 1625-1629	3.7	15
36	Point defects in Cd(Zn)Te and TlBr: Theory. *Journal of Crystal Growth*, **2013**, 379, 84-92	1.6	28
35	Electrical properties of point defects in CdS and ZnS. *Applied Physics Letters*, **2013**, 103, 102103	3.4	51

34	Contributions of point defects, chemical disorder, and thermal vibrations to electronic properties of Cd1ZnxTe alloys. *Physical Review B*, **2013**, 88,	3.3	11
33	Ionic current and polarization effect in TlBr. *Physical Review B*, **2013**, 87,	3.3	21
32	Computational and Photoelectrochemical Study of Hydrogenated Bismuth Vanadate. *Journal of Physical Chemistry C*, **2013**, 117, 10957-10964	3.8	185
31	Simultaneous control of ionic and electronic conductivity in materials: thallium bromide case study. *Physical Review Letters*, **2012**, 108, 246604	7.4	11
30	Ab initio guided optimization of GaTe for radiation detection applications. *Physical Review B*, **2011**, 84,	3.3	22
29	Theory-guided growth of aluminum antimonide single crystals with optimal properties for radiation detection. *Applied Physics Letters*, **2010**, 97, 142104	3.4	9
28	Extrinsic point defects in aluminum antimonide. *Physical Review B*, **2010**, 81,	3.3	21
27	Charge carrier scattering by defects in semiconductors. *Physical Review B*, **2010**, 81,	3.3	37
26	Neutron detection with single crystal organic scintillators **2009**,		16
25	Radiation Effects on InGaN Quantum Wells and GaN Simultaneously Probed by Ion Beam-Induced Luminescence. *IEEE Transactions on Nuclear Science*, **2008**, 55, 3633-3637	1.7	6
24	Atomistic design of thermoelectric properties of silicon nanowires. *Nano Letters*, **2008**, 8, 1111-4	11.5	116
23	Intrinsic point defects in aluminum antimonide. *Physical Review B*, **2008**, 77,	3.3	39
22	Development of GaInNAsSb alloys: Growth, band structure, optical properties and applications. *Physica Status Solidi (B): Basic Research*, **2007**, 244, 2707-2729	1.3	51
21	First principles calculation of point defects and mobility degradation in bulk AlSb for radiation detection application **2007**, 6706, 167		8
20	Photoluminescence and electroabsorption in GaNAsaAsSb heterojunctions. *Electronics Letters*, **2006**, 42, 52	1.1	
19	Green emission from InP-GaP quantum-dot light-emitting diodes. *IEEE Photonics Technology Letters*, **2006**, 18, 895-897	2.2	14
18	MBE Growth and Characterization of Long Wavelength Dilute Nitride IIIV Alloys **2005**, 1-92		3
17	Long-wavelength Dilute Nitride-Antimonide Lasers **2005**, 507-578		1

16	Effects of antimony and ion damage on carrier localization in molecular-beam-epitaxy-grown GaInNAs. *Journal of Vacuum Science & Technology an Official Journal of the American Vacuum Society B, Microelectronics Processing and Phenomena*, **2005**, 23, 1320		9
15	Nearest-neighbor distributions in Ga1−xInxNyAs1−y and Ga1−xInxNyAs1−y−zSbz thin films upon annealing. *Physical Review B*, **2005**, 71,	3.3	32
14	Effects of growth temperature on the structural and optical properties of 1.55-μm GaInNAsSb quantum wells grown on GaAs. *Applied Physics Letters*, **2005**, 87, 021908	3.4	15
13	Quantum-confined Stark effect of GaInNAs(Sb) quantum wells at 1300–1600nm. *Applied Physics Letters*, **2004**, 85, 902-904	3.4	21
12	. *IEEE Journal of Quantum Electronics*, **2004**, 40, 656-664	2	68
11	Structural changes on annealing of MBE grown (Ga, In)(N, As) as measured by X-ray absorption fine structure. *Journal of Crystal Growth*, **2003**, 251, 408-411	1.6	13
10	Nearest-neighbor configuration in (GaIn)(NAs) probed by x-ray absorption spectroscopy. *Physical Review Letters*, **2003**, 90, 145505	7.4	112
9	Method for Supporting Platinum on Single-Walled Carbon Nanotubes for a Selective Hydrogenation Catalyst. *Chemistry of Materials*, **2001**, 13, 733-737	9.6	409
8	Molecular mechanics of binding in carbon-nanotube–polymer composites. *Journal of Materials Research*, **2000**, 15, 2770-2779	2.5	300
7	Study Of Single-Wall Carbon Nanotube-Supported Platinum Catalyst For Selective Hydrogenation Of The Carbonyl Function On An (Unsaturated Aldehyde. *Microscopy and Microanalysis*, **1999**, 5, 142-143	2.5	
6	Towards probing pentagons on carbon nanotube tips. *Surface Science*, **1999**, 421, L150-L155	1.8	9
5	Young's modulus of single-walled carbon nanotubes. *Journal of Applied Physics*, **1998**, 84, 1939-1943	2.5	306
4	Radial compression and controlled cutting of carbon nanotubes. *Journal of Chemical Physics*, **1998**, 109, 2509-2512	3.9	57
3	Carbon nanotube caps as springs: Molecular dynamics simulations. *Physical Review B*, **1998**, 58, 12649-12651	3.7	24
2	Structure and Oxidation Patterns of Carbon Nanotubes. *Journal of Materials Research*, **1998**, 13, 2432-2437	2.5	102
1	HRTEM of Initial Oxidation of Carbon Nanotube Tips. *Microscopy and Microanalysis*, **1997**, 3, 421-422	0.5	1