

Geoffrey Pourtois

List of Publications by Citations

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

71
papers

2,350
citations

19
h-index

48
g-index

74
ext. papers

2,558
ext. citations

4.8
avg, IF

4.52
L-index

#	Paper	IF	Citations
71	Strain-induced semiconductor to metal transition in the two-dimensional honeycomb structure of MoS ₂ . <i>Nano Research</i> , 2012 , 5, 43-48	10	518
70	Bandgap opening in oxygen plasma-treated graphene. <i>Nanotechnology</i> , 2010 , 21, 435203	3.4	253
69	Exciton migration in rigid-rod conjugated polymers: an improved Förster model. <i>Journal of the American Chemical Society</i> , 2005 , 127, 4744-62	16.4	245
68	Alternating oligo(p-phenylene vinylene)-perylene bisimide copolymers: synthesis, photophysics, and photovoltaic properties of a new class of donor-acceptor materials. <i>Journal of the American Chemical Society</i> , 2003 , 125, 8625-38	16.4	184
67	Mechanical and Electronic Properties of Thin-Film Transistors on Plastic, and Their Integration in Flexible Electronic Applications. <i>Advanced Materials</i> , 2016 , 28, 4266-82	24	178
66	Photophysical properties of ruthenium(II) polycyclic aromatic compounds: a theoretical insight. <i>Journal of the American Chemical Society</i> , 2004 , 126, 683-92	16.4	114
65	Analytical and self-consistent quantum mechanical model for a surrounding gate MOS nanowire operated in JFET mode. <i>Journal of Computational Electronics</i> , 2008 , 7, 380-383	1.8	76
64	Single Layer vs Bilayer Graphene: A Comparative Study of the Effects of Oxygen Plasma Treatment on Their Electronic and Optical Properties. <i>Journal of Physical Chemistry C</i> , 2011 , 115, 16619-16624	3.8	56
63	Capturing wetting states in nanopatterned silicon. <i>ACS Nano</i> , 2014 , 8, 885-93	16.7	51
62	Interfaces of high-k dielectrics on GaAs: Their common features and the relationship with Fermi level pinning (Invited Paper). <i>Microelectronic Engineering</i> , 2009 , 86, 1529-1535	2.5	48
61	Layer-controlled epitaxy of 2D semiconductors: bridging nanoscale phenomena to wafer-scale uniformity. <i>Nanotechnology</i> , 2018 , 29, 425602	3.4	41
60	Titanium Silicide on Si:P With Precontact Amorphization Implantation Treatment: Contact Resistivity Approaching $1 \times 10^{-9} \Omega\text{-cm}^2$. <i>IEEE Transactions on Electron Devices</i> , 2016 , 63, 4632-4641	2.9	35
59	Ni fully silicided gates for 45nm CMOS applications. <i>Microelectronic Engineering</i> , 2005 , 82, 441-448	2.5	32
58	First-principles thermodynamics and defect kinetics guidelines for engineering a tailored RRAM device. <i>Journal of Applied Physics</i> , 2016 , 119, 225107	2.5	31
57	Germanium: The Past and Possibly a Future Material for Microelectronics. <i>ECS Transactions</i> , 2007 , 11, 479-493	1	30
56	HfO _x as RRAM material [First principles insights on the working principles. <i>Microelectronic Engineering</i> , 2014 , 120, 13-18	2.5	29
55	STM imaging of a heptanuclear ruthenium(II) dendrimer, mono-add layer on graphite. <i>Chemistry - A European Journal</i> , 2000 , 6, 1331-6	4.8	29

54	The Vibrational Signature of the Aluminum/Polythiophene Interface. <i>Advanced Materials</i> , 1998 , 10, 319-324	25
53	Topological to trivial insulating phase transition in stanene. <i>Nano Research</i> , 2016 , 9, 774-778	10 23
52	Opportunities in nanometer sized Si wires for PV applications. <i>Progress in Materials Science</i> , 2013 , 58, 1361-1387	42.2 19
51	A density-functional theory simulation of the formation of Ni-doped fullerenes by ion implantation. <i>Carbon</i> , 2011 , 49, 1013-1017	10.4 19
50	Reactive molecular dynamics simulations on SiO ₂ -coated ultra-small Si-nanowires. <i>Nanoscale</i> , 2013 , 5, 719-25	7.7 18
49	Study of the Reliability Impact of Chlorine Precursor Residues in Thin Atomic-Layer-Deposited HfO_2 Layers. <i>IEEE Transactions on Electron Devices</i> , 2007 , 54, 752-758	2.9 16
48	Toward an Understanding of the Electric Field-Induced Electrostatic Doping in van der Waals Heterostructures: A First-Principles Study. <i>ACS Applied Materials & Interfaces</i> , 2017 , 9, 7725-7734	9.5 15
47	Atomic Layer Deposition of Ruthenium on Ruthenium Surfaces: A Theoretical Study. <i>Journal of Physical Chemistry C</i> , 2015 , 119, 6592-6603	3.8 14
46	Growth and Material Characterization of Hafnium Titanates Deposited by Atomic Layer Deposition. <i>Journal of the Electrochemical Society</i> , 2009 , 156, G145	3.9 14
45	The Influence of the Epitaxial Growth Process Parameters on Layer Characteristics and Device Performance in Si-passivated Ge pMOSFETs. <i>ECS Transactions</i> , 2009 , 19, 183-194	1 13
44	Te-induced modulation of the MoS ₂ /SiO ₂ interface effective work function. <i>Applied Physics Letters</i> , 2008 , 92, 113504	3.4 13
43	First-principles material modeling of solid-state electrolytes with the spinel structure. <i>Physical Chemistry Chemical Physics</i> , 2014 , 16, 5399-406	3.6 12
42	Work-function modification of Au and Ag surfaces upon deposition of self-assembled monolayers: influence of the choice of the theoretical approach and the thiol decomposition scheme. <i>ChemPhysChem</i> , 2013 , 14, 2939-46	3.2 12
41	(Invited) Vanadium Oxide as a Memory Material. <i>ECS Transactions</i> , 2011 , 35, 233-243	1 12
40	Dielectric Response of Ta ₂ O ₅ , NbTaO ₅ and Nb ₂ O ₅ from First-Principles Investigations. <i>ECS Transactions</i> , 2009 , 19, 729-737	1 11
39	Effect of Ion Coordination on the Conformational and Electronic Structure of 3,4-Bis(alkylthio)thiophenes. <i>European Journal of Inorganic Chemistry</i> , 2001 , 2001, 821-828	2.3 11
38	On the manifestation of phosphorus-vacancy complexes in epitaxial Si:P films. <i>Applied Physics Letters</i> , 2016 , 108, 082106	3.4 11
37	Evolution of phosphorus-vacancy clusters in epitaxial germanium. <i>Journal of Applied Physics</i> , 2019 , 125, 025701	2.5 9

36	Contact Resistance at MoS ₂ -Based 2D Metal/Semiconductor Lateral Heterojunctions. <i>ACS Applied Nano Materials</i> , 2019 , 2, 760-766	5.6	9
35	Grain-Boundary-Induced Strain and Distortion in Epitaxial Bilayer MoS ₂ Lattice. <i>Journal of Physical Chemistry C</i> , 2020 , 124, 6472-6478	3.8	8
34	Mechanisms for the Trimethylaluminum Reaction in Aluminum Oxide Atomic Layer Deposition on Sulfur Passivated Germanium. <i>Journal of Physical Chemistry C</i> , 2011 , 115, 17523-17532	3.8	8
33	The Importance of Moisture Control for EOT Scaling of Hf-Based Dielectrics. <i>Journal of the Electrochemical Society</i> , 2009 , 156, H416	3.9	8
32	Crystallization resistance of barium titanate zirconate ultrathin films from aqueous CSD: a study of cause and effect. <i>Journal of Materials Chemistry</i> , 2009 , 19, 1115		8
31	The Role of Nonidealities in the Scaling of MoS ₂ FETs. <i>IEEE Transactions on Electron Devices</i> , 2018 , 65, 4635-4640	2.9	8
30	Hole-Doping Induced Ferromagnetism in Monolayer SnO: A First-Principles Study. <i>ECS Transactions</i> , 2017 , 80, 339-345	1	7
29	(Invited) Boosting the On-Current of Si-Based Tunnel Field-Effect Transistors. <i>ECS Transactions</i> , 2010 , 33, 363-372	1	6
28	Silicene nanoribbons on transition metal dichalcogenide substrates: Effects on electronic structure and ballistic transport. <i>Nano Research</i> , 2016 , 9, 3394-3406	10	5
27	(Invited) Chemisorption Reaction Mechanisms for Atomic Layer Deposition of High-k Oxides on High Mobility Channels. <i>ECS Transactions</i> , 2010 , 33, 343-353	1	5
26	On the Evolution of Strain and Electrical Properties in As-Grown and Annealed Si:P Epitaxial Films for Source-Drain Stressor Applications. <i>ECS Journal of Solid State Science and Technology</i> , 2018 , 7, P228-P237	2	4
25	First-Principles Investigation of (100)Ge/Ge(Hf)O ₂ Interfaces. <i>ECS Transactions</i> , 2007 , 11, 471-478	1	4
24	(Invited) Sub-40mV Sigma VTH Igzo nFETs in 300mm Fab. <i>ECS Transactions</i> , 2020 , 98, 205-217	1	4
23	Microcanonical RT-TDDFT simulations of realistically extended devices. <i>Journal of Chemical Physics</i> , 2018 , 149, 124701	3.9	4
22	Oxygen Defect Stability in Amorphous, C-Axis Aligned, and Spinel IGZO. <i>ACS Applied Electronic Materials</i> , 2021 , 3, 4037-4046	4	4
21	Heavily phosphorus doped germanium: Strong interaction of phosphorus with vacancies and impact of tin alloying on doping activation. <i>Journal of Applied Physics</i> , 2019 , 125, 225703	2.5	3
20	Source/Drain Materials for Ge nMOS Devices: Phosphorus Activation in Epitaxial Si, Ge, Ge _{1-x} Sn _x and Si _y Ge _{1-y} Sn _x . <i>ECS Journal of Solid State Science and Technology</i> , 2020 , 9, 044010	2	3
19	Some Critical Issues in Pattern Collapse Prevention and Repair. <i>Solid State Phenomena</i> , 2016 , 255, 147-151	14	3

18	Stability of Si epoxide defects in Si nanowires: a mixed reactive force field/DFT study. <i>Physical Chemistry Chemical Physics</i> , 2013 , 15, 15091-7	3.6	3
17	Ab-initio study of the segregation and electronic properties of neutral and charged B and P dopants in Si and Si/SiO ₂ nanowires. <i>Journal of Applied Physics</i> , 2015 , 118, 104306	2.5	3
16	(Invited) First-Principles Investigation of High-k Dielectrics for Nonvolatile Memories. <i>ECS Transactions</i> , 2010 , 33, 393-407	1	3
15	(Invited) Stress Simulations of Fins, Wires, and Nanosheets. <i>ECS Transactions</i> , 2020 , 98, 253-265	1	3
14	Nature of electron trap states under inversion at In _{0.53} Ga _{0.47} As/Al ₂ O ₃ interfaces. <i>Applied Physics Letters</i> , 2017 , 110, 111602	3.4	2
13	Quantum simulations of electrostatics in Si cylindrical junctionless nanowire nFETs and pFETs with a homogeneous channel including strain and arbitrary crystallographic orientations. <i>Solid-State Electronics</i> , 2012 , 71, 30-36	1.7	2
12	Kinetic and thermodynamic heterogeneity: an intrinsic source of variability in Cu-based RRAM memories. <i>Journal of Computational Electronics</i> , 2017 , 16, 1011-1016	1.8	2
11	(Invited) Probing the Intrinsic Limitations of the Contact Resistance of Metal/Semiconductor Interfaces through Atomistic Simulations. <i>ECS Transactions</i> , 2017 , 80, 303-311	1	2
10	(Invited) Aluminium Oxide Atomic Layer Deposition on Semiconductor Substrates. <i>ECS Transactions</i> , 2011 , 41, 149-160	1	2
9	Workfunction (WF) Simulations of Ta/HfO ₂ , Ta ₂ C/HfO ₂ and Ta ₂ C/La ₂ O ₃ /HfO ₂ Capped High-k Stacks. <i>ECS Transactions</i> , 2007 , 11, 135-143	1	2
8	Selectivity Enhancement for Ruthenium Atomic Layer Deposition in Sub-50nm Nanopatterns by Diffusion and Size-Dependent Reactivity. <i>Advanced Materials Interfaces</i> , 2021 , 8, 2100846	4.6	2
7	Characterization of Highly Doped Si:P, Si:As and Si:P:As Epi Layers for Source/Drain Epitaxy. <i>ECS Transactions</i> , 2019 , 93, 11-15	1	2
6	A demonstration of donor passivation through direct formation of V-Asi complexes in As-doped Ge _{1-x} Sn _x . <i>Journal of Applied Physics</i> , 2020 , 127, 195703	2.5	1
5	Strain and ferroelectricity in wurtzite Sc _x Al _{1-x} N materials. <i>Applied Physics Letters</i> , 2021 , 119, 172905	3.4	1
4	Identifying alternative ferroelectric materials beyond Hf(Zr)O ₂ . <i>Applied Physics Letters</i> , 2020 , 117, 262903	3.4	1
3	On the elastic tensors of ultra-thin films: A study of ruthenium. <i>Applied Surface Science</i> , 2022 , 153194	6.7	0
2	Insights into the C Distribution in Si:C/Si:C:P and the Annealing Behavior of Si:C Layers. <i>ECS Journal of Solid State Science and Technology</i> , 2019 , 8, P209-P216	2	
1	Point defect formation near the epitaxial Ge(001) growth surface and the impact on phosphorus doping activation. <i>Journal of Applied Physics</i> , 2021 , 130, 125702	2.5	

