

# Geoffrey Pourtois

## List of Publications by Year in Descending Order

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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	On the elastic tensors of ultra-thin films: A study of ruthenium. <i>Applied Surface Science</i> , <b>2022</b> , 153194	6.7	0
70	Selectivity Enhancement for Ruthenium Atomic Layer Deposition in Sub-50nm Nanopatterns by Diffusion and Size-Dependent Reactivity. <i>Advanced Materials Interfaces</i> , <b>2021</b> , 8, 2100846	4.6	2
69	Strain and ferroelectricity in wurtzite ScxAl1-xN materials. <i>Applied Physics Letters</i> , <b>2021</b> , 119, 172905	3.4	1
68	Oxygen Defect Stability in Amorphous, C-Axis Aligned, and Spinel IGZO. <i>ACS Applied Electronic Materials</i> , <b>2021</b> , 3, 4037-4046	4	4
67	Point defect formation near the epitaxial Ge(001) growth surface and the impact on phosphorus doping activation. <i>Journal of Applied Physics</i> , <b>2021</b> , 130, 125702	2.5	
66	Source/Drain Materials for Ge nMOS Devices: Phosphorus Activation in Epitaxial Si, Ge, Ge1-xSn x and Si y Ge1-y Sn x. <i>ECS Journal of Solid State Science and Technology</i> , <b>2020</b> , 9, 044010	2	3
65	A demonstration of donor passivation through direct formation of V-Asi complexes in As-doped Ge1-xSnx. <i>Journal of Applied Physics</i> , <b>2020</b> , 127, 195703	2.5	1
64	Grain-Boundary-Induced Strain and Distortion in Epitaxial Bilayer MoS2 Lattice. <i>Journal of Physical Chemistry C</i> , <b>2020</b> , 124, 6472-6478	3.8	8
63	(Invited) Sub-40mV Sigma VTH Igzo nFETs in 300mm Fab. <i>ECS Transactions</i> , <b>2020</b> , 98, 205-217	1	4
62	(Invited) Stress Simulations of Fins, Wires, and Nanosheets. <i>ECS Transactions</i> , <b>2020</b> , 98, 253-265	1	3
61	Identifying alternative ferroelectric materials beyond Hf(Zr)O2. <i>Applied Physics Letters</i> , <b>2020</b> , 117, 262903	3.4	1
60	Heavily phosphorus doped germanium: Strong interaction of phosphorus with vacancies and impact of tin alloying on doping activation. <i>Journal of Applied Physics</i> , <b>2019</b> , 125, 225703	2.5	3
59	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> , <b>2019</b> , 8, P209-P216	2	
58	Evolution of phosphorus-vacancy clusters in epitaxial germanium. <i>Journal of Applied Physics</i> , <b>2019</b> , 125, 025701	2.5	9
57	Contact Resistance at MoS2-Based 2D Metal/Semiconductor Lateral Heterojunctions. <i>ACS Applied Nano Materials</i> , <b>2019</b> , 2, 760-766	5.6	9
56	Characterization of Highly Doped Si:P, Si:As and Si:P:As Epi Layers for Source/Drain Epitaxy. <i>ECS Transactions</i> , <b>2019</b> , 93, 11-15	1	2
55	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> , <b>2018</b> , 7, P228-P237	2	4

54	Layer-controlled epitaxy of 2D semiconductors: bridging nanoscale phenomena to wafer-scale uniformity. <i>Nanotechnology</i> , <b>2018</b> , 29, 425602	3.4	41
53	Microcanonical RT-TDDFT simulations of realistically extended devices. <i>Journal of Chemical Physics</i> , <b>2018</b> , 149, 124701	3.9	4
52	The Role of Nonidealities in the Scaling of MoS2 FETs. <i>IEEE Transactions on Electron Devices</i> , <b>2018</b> , 65, 4635-4640	2.9	8
51	Toward an Understanding of the Electric Field-Induced Electrostatic Doping in van der Waals Heterostructures: A First-Principles Study. <i>ACS Applied Materials &amp; Interfaces</i> , <b>2017</b> , 9, 7725-7734	9.5	15
50	Nature of electron trap states under inversion at In <sub>0.53</sub> Ga <sub>0.47</sub> As/Al <sub>2</sub> O <sub>3</sub> interfaces. <i>Applied Physics Letters</i> , <b>2017</b> , 110, 111602	3.4	2
49	Hole-Doping Induced Ferromagnetism in Monolayer SnO: A First-Principles Study. <i>ECS Transactions</i> , <b>2017</b> , 80, 339-345	1	7
48	Kinetic and thermodynamic heterogeneity: an intrinsic source of variability in Cu-based RRAM memories. <i>Journal of Computational Electronics</i> , <b>2017</b> , 16, 1011-1016	1.8	2
47	(Invited) Probing the Intrinsic Limitations of the Contact Resistance of Metal/Semiconductor Interfaces through Atomistic Simulations. <i>ECS Transactions</i> , <b>2017</b> , 80, 303-311	1	2
46	Silicene nanoribbons on transition metal dichalcogenide substrates: Effects on electronic structure and ballistic transport. <i>Nano Research</i> , <b>2016</b> , 9, 3394-3406	10	5
45	Titanium Silicide on Si:P With Precontact Amorphization Implantation Treatment: Contact Resistivity Approaching $1 \times 10^{-9}$ Ohm-cm <sup>2</sup> . <i>IEEE Transactions on Electron Devices</i> , <b>2016</b> , 63, 4632-4641	2.9	35
44	Some Critical Issues in Pattern Collapse Prevention and Repair. <i>Solid State Phenomena</i> , <b>2016</b> , 255, 147-151	14	3
43	Topological to trivial insulating phase transition in stanene. <i>Nano Research</i> , <b>2016</b> , 9, 774-778	10	23
42	On the manifestation of phosphorus-vacancy complexes in epitaxial Si:P films. <i>Applied Physics Letters</i> , <b>2016</b> , 108, 082106	3.4	11
41	Mechanical and Electronic Properties of Thin-Film Transistors on Plastic, and Their Integration in Flexible Electronic Applications. <i>Advanced Materials</i> , <b>2016</b> , 28, 4266-82	24	178
40	First-principles thermodynamics and defect kinetics guidelines for engineering a tailored RRAM device. <i>Journal of Applied Physics</i> , <b>2016</b> , 119, 225107	2.5	31
39	Atomic Layer Deposition of Ruthenium on Ruthenium Surfaces: A Theoretical Study. <i>Journal of Physical Chemistry C</i> , <b>2015</b> , 119, 6592-6603	3.8	14
38	Ab-initio study of the segregation and electronic properties of neutral and charged B and P dopants in Si and Si/SiO <sub>2</sub> nanowires. <i>Journal of Applied Physics</i> , <b>2015</b> , 118, 104306	2.5	3
37	Capturing wetting states in nanopatterned silicon. <i>ACS Nano</i> , <b>2014</b> , 8, 885-93	16.7	51

36	First-principles material modeling of solid-state electrolytes with the spinel structure. <i>Physical Chemistry Chemical Physics</i> , <b>2014</b> , 16, 5399-406	3.6	12
35	HfOx as RRAM material [First principles insights on the working principles. <i>Microelectronic Engineering</i> , <b>2014</b> , 120, 13-18	2.5	29
34	Opportunities in nanometer sized Si wires for PV applications. <i>Progress in Materials Science</i> , <b>2013</b> , 58, 1361-1387	42.2	19
33	Stability of Si epoxide defects in Si nanowires: a mixed reactive force field/DFT study. <i>Physical Chemistry Chemical Physics</i> , <b>2013</b> , 15, 15091-7	3.6	3
32	Reactive molecular dynamics simulations on SiO2-coated ultra-small Si-nanowires. <i>Nanoscale</i> , <b>2013</b> , 5, 719-25	7.7	18
31	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> , <b>2013</b> , 14, 2939-46	3.2	12
30	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> , <b>2012</b> , 71, 30-36	1.7	2
29	Strain-induced semiconductor to metal transition in the two-dimensional honeycomb structure of MoS2. <i>Nano Research</i> , <b>2012</b> , 5, 43-48	10	518
28	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> , <b>2011</b> , 115, 16619-16624	3.8	56
27	Mechanisms for the Trimethylaluminum Reaction in Aluminum Oxide Atomic Layer Deposition on Sulfur Passivated Germanium. <i>Journal of Physical Chemistry C</i> , <b>2011</b> , 115, 17523-17532	3.8	8
26	A density-functional theory simulation of the formation of Ni-doped fullerenes by ion implantation. <i>Carbon</i> , <b>2011</b> , 49, 1013-1017	10.4	19
25	(Invited) Aluminium Oxide Atomic Layer Deposition on Semiconductor Substrates. <i>ECS Transactions</i> , <b>2011</b> , 41, 149-160	1	2
24	(Invited) Vanadium Oxide as a Memory Material. <i>ECS Transactions</i> , <b>2011</b> , 35, 233-243	1	12
23	(Invited) Boosting the On-Current of Si-Based Tunnel Field-Effect Transistors. <i>ECS Transactions</i> , <b>2010</b> , 33, 363-372	1	6
22	(Invited) Chemisorption Reaction Mechanisms for Atomic Layer Deposition of High-k Oxides on High Mobility Channels. <i>ECS Transactions</i> , <b>2010</b> , 33, 343-353	1	5
21	(Invited) First-Principles Investigation of High-k Dielectrics for Nonvolatile Memories. <i>ECS Transactions</i> , <b>2010</b> , 33, 393-407	1	3
20	Bandgap opening in oxygen plasma-treated graphene. <i>Nanotechnology</i> , <b>2010</b> , 21, 435203	3.4	253
19	Dielectric Response of Ta2O5, NbTaO5 and Nb2O5 from First-Principles Investigations. <i>ECS Transactions</i> , <b>2009</b> , 19, 729-737	1	11

18	The Importance of Moisture Control for EOT Scaling of Hf-Based Dielectrics. <i>Journal of the Electrochemical Society</i> , <b>2009</b> , 156, H416	3.9	8
17	The Influence of the Epitaxial Growth Process Parameters on Layer Characteristics and Device Performance in Si-passivated Ge pMOSFETs. <i>ECS Transactions</i> , <b>2009</b> , 19, 183-194	1	13
16	Growth and Material Characterization of Hafnium Titanates Deposited by Atomic Layer Deposition. <i>Journal of the Electrochemical Society</i> , <b>2009</b> , 156, G145	3.9	14
15	Interfaces of high-k dielectrics on GaAs: Their common features and the relationship with Fermi level pinning (Invited Paper). <i>Microelectronic Engineering</i> , <b>2009</b> , 86, 1529-1535	2.5	48
14	Crystallization resistance of barium titanate zirconate ultrathin films from aqueous CSD: a study of cause and effect. <i>Journal of Materials Chemistry</i> , <b>2009</b> , 19, 1115		8
13	Te-induced modulation of the Mo/HfO <sub>2</sub> interface effective work function. <i>Applied Physics Letters</i> , <b>2008</b> , 92, 113504	3.4	13
12	Analytical and self-consistent quantum mechanical model for a surrounding gate MOS nanowire operated in JFET mode. <i>Journal of Computational Electronics</i> , <b>2008</b> , 7, 380-383	1.8	76
11	Germanium: The Past and Possibly a Future Material for Microelectronics. <i>ECS Transactions</i> , <b>2007</b> , 11, 479-493	1	30
10	Study of the Reliability Impact of Chlorine Precursor Residues in Thin Atomic-Layer-Deposited HfO <sub>2</sub> Layers. <i>IEEE Transactions on Electron Devices</i> , <b>2007</b> , 54, 752-758	2.9	16
9	Workfunction (WF) Simulations of Ta/HfO <sub>2</sub> , Ta <sub>2</sub> C/HfO <sub>2</sub> and Ta <sub>2</sub> C/La <sub>2</sub> O <sub>3</sub> /HfO <sub>2</sub> Capped High-k Stacks. <i>ECS Transactions</i> , <b>2007</b> , 11, 135-143	1	2
8	First-Principles Investigation of (100)Ge/Ge(Hf)O <sub>2</sub> Interfaces. <i>ECS Transactions</i> , <b>2007</b> , 11, 471-478	1	4
7	Exciton migration in rigid-rod conjugated polymers: an improved Förster model. <i>Journal of the American Chemical Society</i> , <b>2005</b> , 127, 4744-62	16.4	245
6	Ni fully silicided gates for 45nm CMOS applications. <i>Microelectronic Engineering</i> , <b>2005</b> , 82, 441-448	2.5	32
5	Photophysical properties of ruthenium(II) polycyclic aromatic compounds: a theoretical insight. <i>Journal of the American Chemical Society</i> , <b>2004</b> , 126, 683-92	16.4	114
4	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> , <b>2003</b> , 125, 8625-38	16.4	184
3	Effect of Ion Coordination on the Conformational and Electronic Structure of 3,4-Bis(alkylthio)thiophenes. <i>European Journal of Inorganic Chemistry</i> , <b>2001</b> , 2001, 821-828	2.3	11
2	STM imaging of a heptanuclear ruthenium(II) dendrimer, mono-add layer on graphite. <i>Chemistry - A European Journal</i> , <b>2000</b> , 6, 1331-6	4.8	29
1	The Vibrational Signature of the Aluminum/Polythiophene Interface. <i>Advanced Materials</i> , <b>1998</b> , 10, 319-324		25

