Maarten L Van De Put

List of Publications by Citations

50 papers	716 citations	11 h-index	26 g-index
61 ext. papers	1,065 ext. citations	3.9 avg, IF	4.91 L-index

#	Paper	IF	Citations
50	Dielectric properties of hexagonal boron nitride and transition metal dichalcogenides: from monolayer to bulk. *Npj 2D Materials and Applications*, **2018**, 2,	8.8	293
49	Theoretical studies of electronic transport in monolayer and bilayer phosphorene: A critical overview. *Physical Review B*, **2018**, 98,	3.3	43
48	InGaAs tunnel diodes for the calibration of semi-classical and quantum mechanical band-to-band tunneling models. *Journal of Applied Physics*, **2014**, 115, 184503	2.5	38
47	Tensile strained Ge tunnel field-effect transistors: k □p material modeling and numerical device simulation. *Journal of Applied Physics*, **2014**, 115, 044505	2.5	30
46	Tellurium as a successor of silicon for extremely scaled nanowires: a first-principles study. *Npj 2D Materials and Applications*, **2020**, 4,	8.8	19
45	Quantum mechanical solver for confined heterostructure tunnel field-effect transistors. *Journal of Applied Physics*, **2014**, 115, 053706	2.5	19
44	Monte-Carlo study of electronic transport in non-□-symmetric two-dimensional materials: Silicene and germanene. *Journal of Applied Physics*, **2018**, 124, 044306	2.5	15
43	Perspective of tunnel-FET for future low-power technology nodes **2014**,		15
42	Uniform Strain in Heterostructure Tunnel Field-Effect Transistors. *IEEE Electron Device Letters*, **2016**, 37, 337-340	4.4	13
41	Identification of two-dimensional layered dielectrics from first principles. *Nature Communications*, **2021**, 12, 5051	17.4	13
40	Scalable atomistic simulations of quantum electron transport using empirical pseudopotentials. *Computer Physics Communications*, **2019**, 244, 156-169	4.2	12
39	Electronic Transport Properties of Silicane Determined from First Principles. *Materials*, **2019**, 12,	3.5	11
38	Efficient solution of the Wigner□iouville equation using a spectral decomposition of the force field. *Journal of Computational Physics*, **2017**, 350, 314-325	4.1	11
37	Full-zone spectral envelope function formalism for the optimization of line and point tunnel field-effect transistors. *Journal of Applied Physics*, **2015**, 118, 134502	2.5	11
36	Magnetic order and critical temperature of substitutionally doped transition metal dichalcogenide monolayers. *Npj 2D Materials and Applications*, **2021**, 5,	8.8	11
35	Carrier transport in two-dimensional topological insulator nanoribbons in the presence of vacancy defects. *2D Materials*, **2019**, 6, 025011	5.9	10
34	Can p-channel tunnel field-effect transistors perform as good as n-channel?. *Applied Physics Letters*, **2014**, 105, 043103	3.4	10

33	Magnetic properties and critical behavior of magnetically intercalated WSe2: a theoretical study. *2D Materials*, **2021**, 8, 025009	5.9	10
32	Critical behavior of the ferromagnets CrI3, CrBr3, and CrGeTe3 and the antiferromagnet FeCl2: A detailed first-principles study. *Physical Review B*, **2021**, 103,	3.3	10
31	Hot electrons in Si lose energy mostly to optical phonons: Truth or myth?. *Applied Physics Letters*, **2019**, 114, 222104	3.4	9
30	New Verbeekite-type polymorphic phase and rich phase diagram in the PdSe2–Tex system. *Physical Review B*, **2021**, 104,	3.3	9
29	Monte Carlo Study of Electronic Transport in Monolayer InSe. *Materials*, **2019**, 12,	3.5	9
28	Limitations of ab initio methods to predict the electronic-transport properties of two-dimensional semiconductors: the computational example of 2H-phase transition metal dichalcogenides. *Journal of Computational Electronics*, **2021**, 20, 49-59	1.8	9
27	Electric-field induced quantum broadening of the characteristic energy level of traps in semiconductors and oxides. *Journal of Applied Physics*, **2016**, 120, 245704	2.5	7
26	Inter-ribbon tunneling in graphene: An atomistic Bardeen approach. *Journal of Applied Physics*, **2016** , 119, 214306	2.5	7
25	An envelope function formalism for lattice-matched heterostructures. *Physica B: Condensed Matter*, **2015**, 470-471, 69-75	2.8	6
24	Master-Equation Study of Quantum Transport in Realistic Semiconductor Devices Including Electron-Phonon and Surface-Roughness Scattering. *Physical Review Applied*, **2020**, 13,	4.3	6
23	Transition-metal nitride halide dielectrics for transition-metal dichalcogenide transistors.. *Nanoscale*, **2021**, 14, 157-165	7.7	6
22	Theoretical study of scattering in graphene ribbons in the presence of structural and atomistic edge roughness. *Physical Review Materials*, **2019**, 3,	3.2	6
21	Channel Length Optimization for Planar LDMOS Field-Effect Transistors for Low-Voltage Power Applications. *IEEE Journal of the Electron Devices Society*, **2020**, 8, 711-715	2.3	6
20	. *IEEE Transactions on Electron Devices*, **2020**, 67, 4990-4997	2.9	6
19	Band-to-band tunneling in III-V semiconductor heterostructures **2013**,		5
18	Electronic transport properties of hydrogenated and fluorinated graphene: a computational study. *Journal of Physics Condensed Matter*, **2020**, 32, 495502	1.8	4
17	Computing Curie temperature of two-dimensional ferromagnets in the presence of exchange anisotropy. *Physical Review Research*, **2021**, 3,	3.9	3
16	Phonon-assisted tunneling in direct-bandgap semiconductors. *Journal of Applied Physics*, **2019**, 125, 015704	2.5	3

15	15-band spectral envelope function formalism applied to broken gap tunnel field-effect transistors **2015**,		2
14	Channel Length Scaling Limit for LDMOS Field-Effect Transistors: Semi-classical and Quantum Analysis **2020**,		2
13	Quantum transport simulation of graphene-nanoribbon field-effect transistors with defects. *Journal of Computational Electronics*, **2021**, 20, 21-37	1.8	2
12	Trigonal Tellurium Nanostructure Formation Energy and Band gap **2019**,		1
11	Modeling of inter-ribbon tunneling in graphene **2015**,		1
10	**2014**,		1
9	**2021**,		1
8	Generation of empirical pseudopotentials for transport applications and their application to group IV materials. *Journal of Applied Physics*, **2020**, 128, 034306	2.5	1
7	Figure-of-Merit for Laterally Diffused MOSFETs with Rectangular and Semi-Circular Field Oxides **2021**,		1
6	Ab-Initio Study of Magnetically Intercalated Platinum Diselenide: The Impact of Platinum Vacancies. *Materials*, **2021**, 14,	3.5	1
5	First-principles Study of the Electron and Hole Mobility in Silicane **2019**,		1
4	Simulation of Quantum Current in Double Gate MOSFETs: Vortices in Electron Transport **2018**,		1
3	Self-consistent procedure including envelope function normalization for full-zone Schr□inger-Poisson problems with transmitting boundary conditions. *Journal of Applied Physics*, **2018**, 124, 204501	2.5	1
2	Monte Carlo analysis of phosphorene nanotransistors. *Journal of Computational Electronics*, **2021**, 20, 60-69	1.8	0
1	LDMOS Drift Region With Field Oxides: Figure-of-Merit Derivation and Verification. *IEEE Journal of the Electron Devices Society*, **2022**, 10, 361-366	2.3	