

# Kristel Fobelets

## List of Publications by Year in descending order

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108  
papers

795  
citations

623734

14  
h-index

677142

22  
g-index

109  
all docs

109  
docs citations

109  
times ranked

769  
citing authors

#	ARTICLE	IF	CITATIONS
1	Dispersive optical bistability in stratified structures. <i>Physical Review B</i> , 1991, 44, 8214-8225.	3.2	68
2	Capacitances in double-barrier tunneling structures. <i>IEEE Transactions on Electron Devices</i> , 1991, 38, 2006-2012.	3.0	37
3	Strained Si/SiGe n-channel MOSFETs: impact of cross-hatching on device performance. <i>Semiconductor Science and Technology</i> , 2002, 17, 655-661.	2.0	34
4	A GaAs pressure sensor based on resonant tunnelling diodes. <i>Journal of Micromechanics and Microengineering</i> , 1994, 4, 123-128.	2.6	33
5	High density micro-pyramids with silicon nanowire array for photovoltaic applications. <i>Nanotechnology</i> , 2014, 25, 485202.	2.6	32
6	Two-Sided Silicon Nanowire Array/Bulk Thermoelectric Power Generator. <i>IEEE Electron Device Letters</i> , 2014, 35, 596-598.	3.9	28
7	Thermoelectric Performance of $\text{Si}_{0.8}\text{Ge}_{0.2}$ Nanowire Arrays. <i>IEEE Transactions on Electron Devices</i> , 2012, 59, 3193-3198.	3.0	21
8	In situ Raman spectroscopy of the selective etching of antimonides in GaSb/AlSb/InAs heterostructures. <i>Semiconductor Science and Technology</i> , 1998, 13, 399-403.	2.0	20
9	Field-Effect Transistors Using Silicon Nanowires Prepared by Electroless Chemical Etching. <i>IEEE Electron Device Letters</i> , 2010, 31, 860-862.	3.9	17
10	Spin-on-doping for output power improvement of silicon nanowire array based thermoelectric power generators. <i>Journal of Applied Physics</i> , 2014, 115, 214306.	2.5	17
11	Mechanisms for enhancement of sensing performance in CMOS ISFET arrays using reactive ion etching. <i>Sensors and Actuators B: Chemical</i> , 2019, 292, 297-307.	7.8	17
12	Effect of temperature on the transfer characteristic of a 0.5 $\mu\text{m}$ -gate Si:SiGe depletion-mode n-MODFET. <i>Applied Surface Science</i> , 2004, 224, 390-393.	6.1	16
13	Strained silicon modulation field-effect transistor as a new sensor of terahertz radiation. <i>Semiconductor Science and Technology</i> , 2011, 26, 105006.	2.0	16
14	Terahertz imaging using strained-Si MODFETs as sensors. <i>Solid-State Electronics</i> , 2013, 83, 113-117.	1.4	16
15	Strained-Si modulation doped field effect transistors as detectors of terahertz and sub-terahertz radiation. <i>Semiconductor Science and Technology</i> , 2008, 23, 105001.	2.0	15
16	In-plane dispersion relations of InAs/AlSb/GaSb/AlSb/InAs interband resonant-tunneling diodes. <i>Physical Review B</i> , 1995, 52, 14025-14034.	3.2	14
17	Impact of virtual substrate quality on performance enhancements in strained Si/SiGe heterojunction n-channel MOSFETs. <i>Solid-State Electronics</i> , 2003, 47, 1289-1295.	1.4	14
18	Characterization of Knitted Coils for e-Textiles. <i>IEEE Sensors Journal</i> , 2019, 19, 7835-7840.	4.7	14

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19	pnresonant tunneling light emitting transistor. Applied Physics Letters, 1992, 61, 1051-1053.	3.3	13
20	Conductance modulation of Si nanowire arrays. Applied Physics Letters, 2012, 101, .	3.3	13
21	Oxide-coated silicon nanowire array capacitor electrodes in room temperature ionic liquid. Electrochimica Acta, 2016, 210, 32-37.	5.2	13
22	Si:SiGe quantum wells grown on (118) substrates: Surface morphology and transport properties. Applied Physics Letters, 1997, 70, 1278-1280.	3.3	12
23	n-Siâ€“p-Si1âˆ“xGex nanowire arrays for thermoelectric power generation. Solid-State Electronics, 2013, 83, 107-112.	1.4	12
24	Sub-THz Imaging Using Non-Resonant HEMT Detectors. Sensors, 2018, 18, 543.	3.8	12
25	Comparison of sub-micron Si:SiGe heterojunction nFETs to Si nMOSFET in present-day technologies. Solid-State Electronics, 2004, 48, 1401-1406.	1.4	11
26	Ag-assisted lateral etching of Si nanowires and its application to nanowire transfer. Applied Physics Letters, 2013, 103, .	3.3	11
27	TiO <sub>2</sub> coated Si nanowire electrodes for electrochemical double layer capacitors in room temperature ionic liquid. Journal Physics D: Applied Physics, 2017, 50, 415503.	2.8	11
28	Impact of ammonia on the electrical properties of p-type Si nanowire arrays. Journal of Applied Physics, 2013, 114, 173702.	2.5	10
29	Responsivity enhancement of a strained silicon field-effect transistor detector at 0.3 THz using the terajet effect. Optics Letters, 2021, 46, 3061.	3.3	10
30	Monolithic micropower amplifier using SiGe n-MODFET device. Electronics Letters, 2003, 39, 884.	1.0	9
31	A novel 3D embedded gate field effect transistor â€“ Screen-grid FET â€“ Device concept and modelling. Solid-State Electronics, 2007, 51, 749-756.	1.4	9
32	Sub-Micron Gate Length Field Effect Transistors as Broad Band Detectors of Terahertz Radiation. International Journal of High Speed Electronics and Systems, 2016, 25, 1640020.	0.7	9
33	Reduced Drift of CMOS ISFET pH Sensors Using Graphene Sheets. IEEE Sensors Journal, 2021, 21, 14609-14618.	4.7	9
34	Influence of the Ge concentration in the virtual substrate on the low frequency noise in strained-Si surface n-channel metal-oxide-semiconductor field-effect transistors. Journal of Applied Physics, 2008, 103, 044501.	2.5	8
35	Electrical Transport in Polymer-Covered Silicon Nanowires. IEEE Nanotechnology Magazine, 2012, 11, 661-665.	2.0	8
36	Efficient tool flow for 3D photovoltaic modelling. Computer Physics Communications, 2015, 193, 124-130.	7.5	8

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37	Knitted coils as breathing sensors. <i>Sensors and Actuators A: Physical</i> , 2020, 306, 111945.	4.1	8
38	Low Power Respiration Monitoring Using Wearable 3D Knitted Helical Coils. <i>IEEE Sensors Journal</i> , 2022, 22, 1374-1381.	4.7	8
39	Matrix formalism for the triple-band effective-mass equation. <i>Semiconductor Science and Technology</i> , 1993, 8, 1815-1821.	2.0	7
40	High-frequency capacitances in resonant interband tunneling diodes. <i>Applied Physics Letters</i> , 1994, 64, 2523-2525.	3.3	7
41	Average Drift Mobility and Apparent Sheet-Electron Density Profiles in Strained-SiGe Buried-Channel Depletion-Mode n-MOSFETs. <i>IEEE Transactions on Electron Devices</i> , 2004, 51, 1309-1314.	3.0	7
42	Temperature Dependence of Submicrometer Strained-Si Surface Channel n-Type MOSFETs in DT Mode. <i>IEEE Electron Device Letters</i> , 2004, 25, 334-336.	3.9	7
43	Monolithic large-signal transimpedance amplifier for use in multi-gigabit, short-range optoelectronic interconnect applications. <i>IEEE Transactions on Circuits and Systems Part 2: Express Briefs</i> , 2005, 52, 102-106.	2.2	7
44	Performance improvement of commercial ISFET sensors using reactive ion etching. <i>Microelectronic Engineering</i> , 2018, 192, 61-65.	2.4	7
45	MOS gated Si:SiGe quantum wells formed by anodic oxidation. <i>Semiconductor Science and Technology</i> , 1998, 13, 1442-1445.	2.0	6
46	Si:SiGe MODFET current mirror. <i>Electronics Letters</i> , 1998, 34, 2076.	1.0	6
47	Buried-channel SiGe HMODFET device potential for micropower applications. <i>Solid-State Electronics</i> , 2004, 48, 1423-1431.	1.4	6
48	SiGe virtual substrate HMOS transistor for analogue applications. <i>Applied Surface Science</i> , 2004, 224, 386-389.	6.1	6
49	DC Performance of Deep Submicrometer Schottky-Gated n-Channel Si:SiGe HFETs at Low Temperatures. <i>IEEE Transactions on Electron Devices</i> , 2005, 52, 2067-2074.	3.0	6
50	Geometrical influence on Self Heating in Nanowire and Nanosheet FETs using TCAD Simulations. , 2020, , ,		6
51	Far infrared response of silicon nanowire arrays. <i>RSC Advances</i> , 2013, 3, 4434.	3.6	5
52	Magnetic coupling with 3D knitted helical coils. <i>Sensors and Actuators A: Physical</i> , 2021, 332, 113213.	4.1	5
53	Study of current fluctuations in deep-submicron Si/SiGe n-channel MOSFET: impact of relevant technological parameters on the thermal noise performance. <i>Semiconductor Science and Technology</i> , 2004, 19, S191-S194.	2.0	4
54	Influence of Minority Carrier Gas Donors on Low-Frequency Noise in Silicon Nanowires. <i>IEEE Nanotechnology Magazine</i> , 2014, 13, 1176-1180.	2.0	4

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55	Optimised n-channel Si/SiGe HFETs design for VTH shift immunity. Solid-State Electronics, 2002, 46, 2241-2245.	1.4	3
56	Analogue micropower FET techniques review. Semiconductor Science and Technology, 2004, 19, R19-R34.	2.0	3
57	Low Frequency Noise in Insulated-Gate Strained-Si n-Channel Modulation Doped Field Effect Transistors. Japanese Journal of Applied Physics, 2007, 46, 4011-4015.	1.5	3
58	1/f Noise and trap density in n-channel strained-Si/SiGe modulation doped field effect transistors. Solid-State Electronics, 2009, 53, 626-629.	1.4	3
59	Si <sub>1-x</sub> Gex Nanowire Arrays for Thermoelectric Power Generation. , 2012, , .		3
60	Effect of the Front and Back Illumination on Sub-Terahertz Detection Using n-Channel Strained-Silicon MODFETs. Applied Sciences (Switzerland), 2020, 10, 5959.	2.5	3
61	Internal Thermoelectric Cooling in Nanosheet Gate-All-Around FETs Using Schottky Drain Contacts. IEEE Transactions on Electron Devices, 2021, 68, 4156-4160.	3.0	3
62	Knitted Coil for Inductive Plethysmography. Proceedings (mdpi), 2019, 32, .	0.2	3
63	Determination of the band line-up for strained InGaAs/AlAs heterojunctions using resonant tunnelling diodes. Superlattices and Microstructures, 1992, 11, 27-29.	3.1	2
64	A proposal for a three-bit A/D converter using three resonant tunnelling diodes. Semiconductor Science and Technology, 1993, 8, 2106-2114.	2.0	2
65	High-frequency capacitance of bipolar resonant tunneling diodes. Journal of Applied Physics, 1996, 79, 905.	2.5	2
66	Controlled shift of the optical resonance of fully processed asymmetric Fabry - PÉrot modulator arrays. Semiconductor Science and Technology, 1996, 11, 582-586.	2.0	2
67	Evidence for Inter-Miniband Scattering Due to Electron Heating in Si:SiGe Quantum Wells Grown on Tilted Substrates. Physica Status Solidi (B): Basic Research, 1997, 204, 227-229.	1.5	2
68	Influence of the undoped spacer layer thickness on the DC characteristics of n-type GaAs/AlAs MESFETs. Semiconductor Science and Technology, 1998, 13, 318-321.	2.0	2
69	Dynamic threshold mode operation of p-channel Si and strained-SiGe MOSFETs between 10 K and 300 K. Semiconductor Science and Technology, 2004, 19, L95-L98.	2.0	2
70	Colour coding Ge concentrations in Si <sub>1-x</sub> Gex by bevelling and oxidation: CABOOM. Semiconductor Science and Technology, 2004, 19, 510-515.	2.0	2
71	Noise in strained Si MOSFETs for low-power applications. Journal of Statistical Mechanics: Theory and Experiment, 2009, 2009, P01045.	2.3	2
72	Influence of ambient on conductivity and 1/f noise in Si nanowire arrays. , 2013, , .		2

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73	Optimization of THz response of strained Si MODFETs. Physica Status Solidi C: Current Topics in Solid State Physics, 2015, 12, 1401-1404.	0.8	2
74	Cyclic Voltammetry Peaks Due to Deep Level Traps in Si Nanowire Array Electrodes. IEEE Nanotechnology Magazine, 2018, 17, 154-160.	2.0	2
75	Influence of resistances on characteristics of vertically integrated resonant tunnelling diodes. Electronics Letters, 1993, 29, 57-59.	1.0	1
76	Experimental drain current drop-back in GaAs MESFETs. Electronics Letters, 1995, 31, 2042-2044.	1.0	1
77	Optical media with an imaginary third-order nonlinearity analyzed by Hamiltonian systems. Physical Review A, 1996, 53, 4400-4407.	2.5	1
78	In-situ monitoring of the selective etching of antimonides in GaSb/AlSb/InAs heterostructures using Raman spectroscopy. , 1997, , .		1
79	Si <sup>+</sup> SiGe n-channel modulation-doped field effect transistor on air. Electronics Letters, 2002, 38, 1064.	1.0	1
80	Simulations of Si:SiGe MODFET analogue applications. International Journal of Electronics, 2002, 89, 593-602.	1.4	1
81	Determining the thickness and composition of SiGe heterostructures using an optical microscope. Semiconductor Science and Technology, 2003, 18, 390-392.	2.0	1
82	SiGe HMODFET – KAIST – Micropower Model and Amplifier Realization. IEEE Transactions on Circuits and Systems Part 1: Regular Papers, 2004, 51, 1100-1105.	0.1	1
83	SiGe HMOSFET monolithic inverting current mirror. Solid-State Electronics, 2005, 49, 591-594.	1.4	1
84	A Novel 3D Embedded Gate Field Effect Transistor: Device Concept and Modelling. , 0, , .		1
85	Study of MOS-gated strained-Si Buried Channel Field Effect Transistors. IETE Journal of Research, 2007, 53, 253-262.	2.6	1
86	Coupled inductive sensors for monitoring the pH of electrolyte solutions. , 2011, , .		1
87	Terahertz Imaging Using Strained-Si MODFETs as Sensors. , 2012, , .		1
88	Improving the pH sensitivity of ISFET arrays with reactive ion etching. , 2017, , .		1
89	Numerical Study of the Coupling of Sub-Terahertz Radiation to n-Channel Strained-Silicon MODFETs. Sensors, 2021, 21, 688.	3.8	1
90	Respiratory Inductive Plethysmography System for Knitted Helical Coils. , 2022, 15, .		1

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91	Ambulatory Monitoring Using Knitted 3D Helical Coils. , 2022, 15, .		1
92	Single stage amplifiers on a CMOS grade silicon substrate using a polymer interlayer dielectric with strained silicon MOSFETs. , 0, , .		0
93	Experimental Study of Depletion Mode Si/SiGe MOSFETs for Low-temperature Operation. , 2002, , .		0
94	Noise in nanometric s-Si MOSFET for low-power applications. AIP Conference Proceedings, 2005, , .	0.4	0
95	Visualisation of Ge Condensation in SOI. Materials Research Society Symposia Proceedings, 2006, 913, 1.	0.1	0
96	Unipolar rectifying silicon nanowiresâ€™TCAD study. Physica E: Low-Dimensional Systems and Nanostructures, 2008, 40, 2481-2484.	2.7	0
97	ANALOG AND DIGITAL PERFORMANCE OF THE SCREEN-GRID FIELD EFFECT TRANSISTOR (SGRFET). International Journal of High Speed Electronics and Systems, 2008, 18, 783-792.	0.7	0
98	Correlation between flicker noise and current linearity in ferromagnetic-GaAs-metal tunnel contacts. , 2008, , .		0
99	Screen-Grid Field Effect Transistor for sensing Bio-Molecules. Materials Research Society Symposia Proceedings, 2009, 1191, 106.	0.1	0
100	1âˆ™f Noise in p-Channel Screen-Grid Field Effect Transistors (SGrFETs) as a Device Evaluation Tool. , 2009, , .		0
101	Analysis of RF noise performance of Si/SiGe pseudomorphic MOSFETs. , 2009, , .		0
102	Terahertz photomixing in strained silicon MODFET. , 2010, , .		0
103	Trap density in Ge-on-Si pMOSFETs with Si intermediate layers. , 2011, , .		0
104	Terahertz detection using Si-SiGe MODFETs. , 2013, , .		0
105	Imaging resolution enhancement using terajet effect at 0.3 THz. , 2021, , .		0
106	Gated silicon nanowire for thermo-electric power generation and temperature sensing. Semiconductor Science and Technology, 0, , .	2.0	0
107	Electromagnetic Simulation of the Sub-THz Radiation Coupling to n-channel strained-silicon MODFETs. , 2021, , .		0
108	Mobility of Holes in Nanometer Ge-on-Si p-Type Metal-Oxide-Semiconductor Field-Effect Transistors at Low Temperatures. Acta Physica Polonica A, 2011, 120, 933-935.	0.5	0