Juan A LÃ³pez-Villanueva

List of Publications by Year
in descending order

93 papers	1,875 citations	279701 23 h-index	289141 40 g-index
94 all docs	94 docs citations	94 times ranked	1458 citing authors

#	Article	IF	Citations
1	Constant Phase Element in the Time Domain: The Problem of Initialization. Energies, 2022, 15, 792.	1.6	12
2	A fractional-order model for calendar aging with dynamic storage conditions. Journal of Energy Storage, 2022, 50, 104537.	3.9	6
3	A compact model of the ZARC for circuit simulators in the frequency and time domains. AEU - International Journal of Electronics and Communications, 2022, 153, 154293.	1.7	8
4	Dracon: An Open-Hardware Based Platform for Single-Chip Low-Cost Reconfigurable IoT Devices. Electronics (Switzerland), 2022, 11, 2080.	1.8	4
5	Editorial for the Special Issue on Advances in Capacitive Sensors. Micromachines, 2020, 11, 993.	1.4	0
6	Recent Advances in Printed Capacitive Sensors. Micromachines, 2020, 11, 367.	1.4	35
7	Simple Single Particle Model for Interpreting Fast Charge Results in Intercalation Batteries. , 2020, , .		1
8	Asymmetric enhanced surface interdigitated electrode capacitor with two out-of-plane electrodes. Sensors and Actuators B: Chemical, 2018, 254, 588-596.	4.0	13
9	Hybrid printed device for simultaneous vapours sensing. IEEE Sensors Journal, 2016, , 1-1.	2.4	3
10	Printed electrodes structures as capacitive humidity sensors: A comparison. Sensors and Actuators A: Physical, 2016, 244, 56-65.	2.0	68
11	Tunable MEMS piezoelectric energy harvesting device. Microsystem Technologies, 2016, 22, 823-830.	1.2	22
12	Improved manufacturing process for printed cantilevers by using water removable sacrificial substrate. Sensors and Actuators A: Physical, 2015, 235, 171-181.	2.0	16
13	Cantilever Fabrication by a Printing and Bonding Process. Journal of Microelectromechanical Systems, 2015, 24, 880-886.	1.7	3
14	A printed capacitiveâ€“resistive double sensor for toluene and moisture sensing. Sensors and Actuators B: Chemical, 2015, 210, 542-549.	4.0	35
15	Comparative study of printed capacitive sensors. , 2015, , .		2
16	Space-charge and injection limited current in organic diodes: A unified model. Organic Electronics, 2014, 15, 2526-2535.	1.4	20
17	Electrical characterization of controlled and unintentional modified metalâ€“organic contacts. Organic Electronics, 2014, 15, 2536-2545.	1.4	6
18	Compact Modeling and Contact Effects in Thin Film Transistors. IEEE Transactions on Electron Devices, 2014, 61, 266-277.	1.6	29

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19	Design and characterization of a low thermal drift capacitive humidity sensor by inkjet-printing. Sensors and Actuators B: Chemical, 2014, 195, 123-131.	4.0	118
20	A novel electrode structure compared with interdigitated electrodes as capacitive sensor. Sensors and Actuators B: Chemical, 2014, 204, 552-560.	4.0	68
21	Characterization of organic thin film transistors with hysteresis and contact effects. Organic Electronics, 2013, 14, 3286-3296.	1.4	14
22	Frequency response of variants of a cantilever beam. , 2012, , .		6
23	Influence of size and shape of InAs/GaAs quantum dots in the photophysics of regimented arrays. Journal of Applied Physics, 2012, 111, 114310.	1.1	2
24	Modeling the transition from ohmic to space charge limited current in organic semiconductors. Organic Electronics, 2012, 13, 1700-1709.	1.4	32
25	Effects of Gate Oxide and Junction Nonuniformity on the DC and Low-Frequency Noise Performance of Four-Gate Transistors. IEEE Transactions on Electron Devices, 2012, 59, 459-467.	1.6	60
26	Influence of the Number of Anchoring Groups on the Electronic and Mechanical Properties of Benzeneâ€, Anthraceneâ€•and Pentaceneâ€Based Molecular Devices. ChemPhysChem, 2012, 13, 860-868.	1.0	10
27	Contact effects in compact models of organic thin film transistors: Application to zinc phthalocyanine-based transistors. Organic Electronics, 2011, 12, 832-842.	1.4	35
28	Thermal drift reduction with multiple bias current for MOSFET dosimeters. Physics in Medicine and Biology, 2011, 56, 3535-3550.	1.6	20
29	Miniband structure and photon absorption in regimented quantum dot systems. Journal of Applied Physics, 2011, 109, .	1.1	10
30	Absorption Coefficient in Periodic InAs/GaAs Nanostructures. Journal of Physics: Conference Series, 2010, 245, 012090.	0.3	0
31	Localization and quantification of noise sources in fourâ€gate fieldâ€effectâ€transistors. International Journal of Numerical Modelling: Electronic Networks, Devices and Fields, 2010, 23, 285-300.	1.2	4
32	Intraband photon absorption in edge-defined nanowire superlattices for optoelectronic applications. Journal of Applied Physics, 2010, 108, 124307.	1.1	8
33	A Low-Frequency Noise Model for Four-Gate Field-Effect Transistors. IEEE Transactions on Electron Devices, 2008, 55, 896-903.	1.6	12
34	A Multijunction Solar Cell Simulation Program for the Development of Concentration Systems. , 2007, , .		4
35	Characterization of impurities in GaInNAs pn junctions from capacitance transient spectroscopy. , 2007, , .		0
36	Evaluation of a low-cost commercial mosfet as radiation dosimeter. Sensors and Actuators A: Physical, 2006, 125, 288-295.	2.0	80

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37	Determination of the concentration of recombination centers in thin asymmetrical p-n junctions from capacitance transient spectroscopy. Applied Physics Letters, 2006, 89, 112107.	1.5	11
38	A simple model for analysing the effects of band non-parabolicity in nanostructures. Semiconductor Science and Technology, 2005, 20, 532-539.	1.0	3
39	A solution of the effective-mass SchrÃ¶dinger equation in general isotropic and nonparabolic bands for the study of two-dimensional carrier gases. Journal of Applied Physics, 2005, 98, 033717.	1.1	18
40	Effects of oxygen related defects on the electrical and thermal behavior of a n+â^'p junction. Journal of Applied Physics, 2004, 95, 561-570.	1.1	16
41	Generation-recombination noise in highly asymmetrical pâ€“n junctions. Journal of Applied Physics, 2002, 92, 320-329.	1.1	7
42	Direct and trap-assisted elastic tunneling through ultrathin gate oxides. Journal of Applied Physics, 2002, 91, 5116-5124.	1.1	77
43	Monte Carlo simulation of electron mobility in silicon-on-insulator structures. Solid-State Electronics, 2002, 46, 1715-1721.	0.8	9
44	Electron transport in ultrathin double-gate SOI devices. Microelectronic Engineering, 2001, 59, 423-427.	1.1	8
45	A simple subthreshold swing model for short channel MOSFETs. Solid-State Electronics, 2001, 45, 391-397.	0.8	56
46	Electron transport in silicon-on-insulator devices. Solid-State Electronics, 2001, 45, 613-620.	0.8	7
47	Strained-Si on Si/sub 1-x/Ge/sub x/ MOSFET inversion layer centroid modeling. IEEE Transactions on Electron Devices, 2001, 48, 2447-2449.	1.6	12
48	The Escape Time of Electrons from Localised States. Physica Status Solidi (B): Basic Research, 2000, 218, 299-302.	0.7	0
49	Effects of the inversion-layer centroid on the performance of double-gate MOSFETs. IEEE Transactions on Electron Devices, 2000, 47, 141-146.	1.6	72
50	Deep submicrometer SOI MOSFET drain current model including series resistance, self-heating and velocity overshoot effects. IEEE Electron Device Letters, 2000, 21, 239-241.	2.2	14
51	Semiempirical closed-form models for the inversion-layer centroid of a p-MOS including quantum effects. Semiconductor Science and Technology, 2000, 15, 85-90.	1.0	0
52	Hole confinement and energy subbands in a silicon inversion layer using the effective mass theory. Journal of Applied Physics, 1999, 86, 438-444.	1.1	40
53	Experimental determination of the effective mobility in NMOSFETs: a comparative study. Solid-State Electronics, 1999, 43, 701-707.	0.8	0
54	A computational study of the strained-Si MOSFET: a possible alternative for the next century electronics industry. Computer Physics Communications, 1999, 121-122, 547-549.	3.0	1

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55	An analytical model for the electron velocity overshoot effects in strained-Si on Si/sub x/Ge/sub 1-x/ MOSFETs. IEEE Transactions on Electron Devices, 1998, 45, 993-995.	1.6	4
56	Monte Carlo simulation of electron transport properties in extremely thin SOI MOSFET's. IEEE Transactions on Electron Devices, 1998, 45, 1122-1126.	1.6	74
57	A model for the drain current of deep submicrometer MOSFETs including electron-velocity overshoot. IEEE Transactions on Electron Devices, 1998, 45, 2249-2251.	1.6	22
58	Energy dependence of the effective mass in the envelope-function approximation. Physica B: Condensed Matter, 1998, 253, 242-249.	1.3	5
59	Monte Carlo Simulation of a Submicron MOSFET Including Inversion Layer Quantization. VLSI Design, 1998, 6, 287-290.	0.5	1
60	Low temperature mobility improvement in high-mobility strained-Si/Si_{1-x}Ge_x multilayer MOSFETs. European Physical Journal Special Topics, 1998, 08, Pr3-57-Pr3-60.	0.2	1
61	Understanding the improved performance of strained channel MOSFETs. Semiconductor Science and Technology, 1997, 12, 1603-1608.	1.0	5
62	Influence of mobility fluctuations on random telegraph signal amplitude in n-channel metalâ€“oxideâ€“semiconductor field-effect transistors. Journal of Applied Physics, 1997, 82, 4621-4628.	1.1	15
63	A detailed simulation study of the performance of -silicon carbide MOSFETs and a comparison with their silicon counterparts. Semiconductor Science and Technology, 1997, 12, 655-661.	1.0	1
64	The dependence of the electron mobility on the longitudinal electric field in MOSFETs. Semiconductor Science and Technology, 1997, 12, 321-330.	1.0	34
65	Quantum two-dimensional calculation of time constants of random telegraph signals in metal-oxideâ€“semiconductor structures. Physical Review B, 1997, 56, 9565-9574.	1.1	116
66	Modeling effects of electron-velocity overshoot in a MOSFET. IEEE Transactions on Electron Devices, 1997, 44, 841-846.	1.6	53
67	Study of the effects of a stepped doping profile in short-channel MOSFETs. IEEE Transactions on Electron Devices, 1997, 44, 1425-1431.	1.6	22
68	A closed-loop evaluation and validation of a method for determining the dependence of the electron mobility on the longitudinal-electric field in MOSFETs. IEEE Transactions on Electron Devices, 1997, 44, 1447-1453.	1.6	5
69	Effects of the inversion layer centroid on MOSFET behavior. IEEE Transactions on Electron Devices, 1997, 44, 1915-1922.	1.6	67
70	Electron transport properties of quantized silicon carbide inversion layers. Journal of Electronic Materials, 1997, 26, 203-207.	1.0	9
71	Influence of the doping profile on electron mobility in a MOSFET. IEEE Transactions on Electron Devices, 1996, 43, 2023-2025.	1.6	2
72	Semi-empirical model of electron mobility in MOSFETs in strong inversion regime. IET Circuits, Devices and Systems, 1996, 143, 202.	0.6	0

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73	A procedure for the determination of the effective mobility in an N-MOSFET in the moderate inversion region. Solid-State Electronics, 1996, 39, 875-883.	0.8	11
74	Electric Field Dependence of the Electron Capture Cross Section of Neutral Traps in SiO2. Journal of the Electrochemical Society, 1996, 143, 2687-2690.	1.3	17
75	Strained Si/SiGe Heterostructures at Low Temperatures. A Monte Carlo Study. European Physical Journal Special Topics, 1996, 06, C3-87-C3-92.	0.2	1
76	Low-Temperature Modelling of Electron-Velocity-Overshoot Effects on 70-250 nm Gate-Length MOSFETs. European Physical Journal Special Topics, 1996, 06, C3-13-C3-18.	0.2	0
77	Universality of electron mobility curves in MOSFETs: a Monte Carlo study. IEEE Transactions on Electron Devices, 1995, 42, 258-265.	1.6	62
78	Electron trapping and detrapping in near-interfacial traps during Fowler-Nordheim tunneling injection at 77 K. Microelectronic Engineering, 1995, 28, 317-320.	1.1	5
79	Effects of bulk-impurity and interface-charge on the electron mobility in MOSFETs. Solid-State Electronics, 1995, 38, 611-614.	0.8	6
80	A model for the quantized accumulation layer in metal-insulator-semiconductor structures. Solid-State Electronics, 1995, 38, 203-210.	0.8	37
81	Monte Carlo study of the statistics of electron capture by shallow donors in silicon at low temperatures. Physical Review B, 1995, 51, 14147-14151.	1.1	8
82	Comprehensive Monte Carlo simulation of the nonradiative carrier capture process by impurities in semiconductors. Journal of Applied Physics, 1995, 77, 1998-2005.	1.1	2
83	Oxide charge space correlation in inversion layers. II. Three-dimensional oxide charge distribution. Semiconductor Science and Technology, 1995, 10, 592-600.	1.0	14
84	Influence of the oxide-charge distribution profile on electron mobility in MOSFET's. IEEE Transactions on Electron Devices, 1995, 42, 999-1004.	1.6	15
85	Effects of oxide-charge space correlation on electron mobility in inversion layers. Semiconductor Science and Technology, 1994, 9, 1102-1107.	1.0	19
86	Influence of the interface-state density on the electron mobility in silicon inversion layers. Journal of Electronic Materials, 1993, 22, 1159-1163.	1.0	10
87	Modified SchrÃ¶dinger equation including nonparabolicity for the study of a two-dimensional electron gas. Physical Review B, 1993, 48, 1626-1631.	1.1	50
88	Evolution of electrical magnitudes in gradualpâ€•njunctions with deep levels during the emission of majority carriers. Journal of Applied Physics, 1992, 72, 4946-4953.	1.1	9
89	A non-destructive method to determine impurity-profiles in non-abrupt p-n junctions with deep levels. Solid-State Electronics, 1992, 35, 1729-1736.	0.8	2
90	A high-frequency bidirectional capacitance method to study the evolution of the interface state density generated at low temperatures. Solid-State Electronics, 1992, 35, 73-81.	0.8	2

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91	Importance of the choice of the profile model for ap-n junction in the location of deep levels. Journal of Electronic Materials, 1992, 21, 883-886.	1.0	2
92	Analysis of the effects of constantâ€current Fowlerâ€“Nordheimâ€tunneling injection with charge trapping inside the potential barrier. Journal of Applied Physics, 1991, 70, 3712-3720.	1.1	40
93	Analysis of a reverse-biased linearly graded junction with high concentration of deep impurities. Solid-State Electronics, 1990, 33, 805-811.	0.8	10