Francisco J GarcÃa-SÃ¡nchez

List of Publications by Year
in descending order

110 papers	3,510 citations	218592 26 h-index	143943 57 g-index
113 all docs	113 docs citations	113 times ranked	2756 citing authors

#	Article	IF	Citations
1	A review of recent MOSFET threshold voltage extraction methods. Microelectronics Reliability, 2002, 42, 583-596.	0.9	740
2	New method to extract the model parameters of solar cells from the explicit analytic solutions of their illuminated characteristics. Solar Energy Materials and Solar Cells, 2006, 90, 352-361.	3.0	350
3	Revisiting MOSFET threshold voltage extraction methods. Microelectronics Reliability, 2013, 53, 90-104.	0.9	220
4	New procedure for the extraction of basic a-Si:H TFT model parameters in the linear and saturation regions. Solid-State Electronics, 2001, 45, 1077-1080.	0.8	134
5	Exact analytical solutions of the forward non-ideal diode equation with series and shunt parasitic resistances. Solid-State Electronics, 2000, 44, 1861-1864.	0.8	120
6	A Review of Core Compact Models for Undoped Double-Gate SOI MOSFETs. IEEE Transactions on Electron Devices, 2007, 54, 131-140.	1.6	104
7	Exact analytical solution of channel surface potential as an explicit function of gate voltage in undoped-body MOSFETs using the Lambert W function and a threshold voltage definition therefrom. Solid-State Electronics, 2003, 47, 2067-2074.	0.8	99
8	Rigorous analytic solution for the drain current of undoped symmetric dual-gate MOSFETs. Solid-State Electronics, 2005, 49, 640-647.	0.8	99
9	Analytic Solution of the Channel Potential in Undoped Symmetric Dual-Gate MOSFETs. IEEE Transactions on Electron Devices, 2005, 52, 1669-1672.	1.6	83
10	An Explicit Multiexponential Model as an Alternative to Traditional Solar Cell Models With Series and Shunt Resistances. IEEE Journal of Photovoltaics, 2012, 2, 261-268.	1.5	69
11	A ZnO/p-CuInSe2 thin film solar cell prepared entirely by spray pyrolysis. Thin Solid Films, 1982, 90, 419-423.	0.8	68
12	Extraction of non-ideal junction model parameters from the explicit analytic solutions of its I–V characteristics. Solid-State Electronics, 2005, 49, 465-472.	0.8	60
13	Spray pyrolysis in solar cells and gas sensors. Progress in Crystal Growth and Characterization, 1981, 4, 221-248.	0.8	59
14	Direct extraction of semiconductor device parameters using lateral optimization method. Solid-State Electronics, 1999, 43, 845-848.	0.8	53
15	New method for determination of harmonic distortion in SOI FD transistors. Solid-State Electronics, 2002, 46, 103-108.	0.8	51
16	Approximate analytical expression for equation of ideal diode with series and shunt resistances. Electronics Letters, 1992, 28, 1964.	0.5	46
17	A review of diode and solar cell equivalent circuit model lumped parameter extraction procedures. Facta Universitatis - Series Electronics and Energetics, 2014, 27, 57-102.	0.6	45
18	Long-channel silicon-on-insulator MOSFET theory. Solid-State Electronics, 1992, 35, 1291-1298.	0.8	43

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19	Understanding threshold voltage in undoped-body MOSFETs: An appraisal of various criteria. Microelectronics Reliability, 2006, 46, 731-742.	0.9	43
20	New simple procedure to determine the threshold voltage of MOSFETs. Solid-State Electronics, 2000, 44, 673-675.	0.8	42
21	A review of DC extraction methods for MOSFET series resistance and mobility degradation model parameters. Microelectronics Reliability, 2017, 69, 1-16.	0.9	38
22	Procedure for determining diode parameters at very low forward voltage. Solid-State Electronics, 1999, 43, 2129-2133.	0.8	37
23	Lumped Parameter Modeling of Organic Solar Cellsâ€™ S-Shaped Iâ€"V Characteristics. IEEE Journal of Photovoltaics, 2013, 3, 330-335.	1.5	36
24	A generalized model for a two-terminal device and its applications to parameter extraction. Solid-State Electronics, 1995, 38, 265-266.	0.8	32
25	Simple method for extracting the difference between the drain and source series resistances in MOSFETs. Electronics Letters, 1994, 30, 1013-1015.	0.5	31
26	Extraction method for polycrystalline TFT above and below threshold model parameters. Solid-State Electronics, 2002, 46, 2295-2300.	0.8	29
27	An explicit multi-exponential model for semiconductor junctions with series and shunt resistances. Microelectronics Reliability, 2011, 51, 2044-2048.	0.9	29
28	Threshold voltage extraction in Tunnel FETs. Solid-State Electronics, 2014, 93, 49-55.	0.8	28
29	Correlation between low-frequency electric conductivity and permittivity in the diaphysis of bovine femoral bone. IEEE Transactions on Biomedical Engineering, 1992, 39, 523-526.	2.5	27
30	A simple procedure to extract the threshold voltage of amorphous thin film MOSFETs in the saturation region. Solid-State Electronics, 2001, 45, 663-667.	0.8	27
31	An improved definition for modeling the threshold voltage of MOSFETs. Solid-State Electronics, 1998, 42, 1743-1746.	0.8	26
32	A new method to extract diode parameters under the presence of parasitic series and shunt resistance. Microelectronics Reliability, 2000, 40, 355-358.	0.9	26
33	The nonequilibrium inversion layer charge of the thin-film SOI MOSFET. IEEE Transactions on Electron Devices, 1989, 36, 1651-1656.	1.6	24
34	Modelling solar cell S-shaped I-V characteristics with DC lumped-parameter equivalent circuits a review. Facta Universitatis - Series Electronics and Energetics, 2017, 30, 327-350.	0.6	24
35	A new approach to extract the threshold voltage of MOSFETs. IEEE Transactions on Electron Devices, 1997, 44, 1523-1528.	1.6	23
36	New approach for defining the threshold voltage of MOSFETs. IEEE Transactions on Electron Devices, 2001, 48, 809-813.	1.6	22

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37	S-Shaped ${I}$ – ${V}$ Characteristics of Organic Solar Cells: Solving Mazhari's Lumped-Parameter Equivalent Circuit Model. IEEE Transactions on Electron Devices, 2017, 64, 4622-4627.	1.6	22
38	The foundation of a charge-sheet model for the thin-film MOSFET. Solid-State Electronics, 1988, 31, 1497-1500.	0.8	21
39	Extracting the series resistance and effective channel length of short-channel MOSFETs at liquid nitrogen temperature. Solid-State Electronics, 1994, 37, 1943-1948.	0.8	21
40	Two-dimensional numerical analysis for extracting the effective channel length of short-channel MOSFETs. Solid-State Electronics, 1995, 38, 1155-1159.	0.8	20
41	Determination of physical mechanisms contributing to the difference between drain and source resistances in short-channel MOSFETs. Solid-State Electronics, 1996, 39, 211-215.	0.8	20
42	Unification of asymmetric DG, symmetric DG and bulk undoped-body MOSFET drain current. Solid-State Electronics, 2006, 50, 1796-1800.	0.8	20
43	n-CdS/p-ZnIn2Se4 thin film solar cell. Thin Solid Films, 1980, 69, 137-139.	0.8	19
44	A method to extract mobility degradation and total series resistance of fully-depleted SOI MOSFETs. IEEE Transactions on Electron Devices, 2002, 49, 82-88.	1.6	19
45	Indirect fitting procedure to separate the effects of mobility degradation and source-and-drain resistance in MOSFET parameter extraction. Microelectronics Reliability, 2009, 49, 689-692.	0.9	18
46	Preparation of (thin film SnO2)/(textured n-Si) solar cells by spray pyrolysis. Thin Solid Films, 1982, 97, 47-51.	0.8	16
47	An improved method for extracting the difference between drain and source resistances in MOSFETs. Solid-State Electronics, 1996, 39, 419-421.	0.8	15
48	On the extraction of the source and drain series resistances of MOSFETs. Microelectronics Reliability, 1999, 39, 1173-1184.	0.9	15
49	A DC Method to Extract Mobility Degradation and Series Resistance of Multifinger Microwave MOSFETs. IEEE Transactions on Electron Devices, 2016, 63, 1821-1826.	1.6	15
50	Evaluating MOSFET harmonic distortion by successive integration of the I–V characteristics. Solid-State Electronics, 2008, 52, 1092-1098.	0.8	14
51	Drain Current and Transconductance Model for the Undoped Body Asymmetric Double-Gate MOSFET. , 2006, , .		13
52	Modeling the Impact of Multi-Fingering Microwave MOSFETs on the Source and Drain Resistances. IEEE Transactions on Microwave Theory and Techniques, 2014, 62, 3255-3261.	2.9	12
53	Conductance-to-Current-Ratio-Based Parameter Extraction in MOS Leakage Current Models. IEEE Transactions on Electron Devices, 2016, 63, 3844-3850.	1.6	12
54	Generic complex-variable potential equation for the undoped asymmetric independent double-gate MOSFET. Solid-State Electronics, 2011, 57, 43-51.	0.8	11

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55	A minimal integral nonlinearity criterion to optimize the design of a new tanh/sinh-type bipolar transconductor. IEEE Transactions on Circuits and Systems Part 1: Regular Papers, 2002, 49, 1062-1070.	0.1	10
56	A unified look at the use of successive differentiation and integration in MOSFET model parameter extraction. Microelectronics Reliability, 2015, 55, 293-307.	0.9	10
57	Modeling real junctions by a series combination of two ideal diodes with parallel resistance and its parameter extraction. Solid-State Electronics, 2001, 45, 223-228.	0.8	9
58	A new approach to the extraction of single exponential diode model parameters. Solid-State Electronics, 2018, 144, 33-38.	0.8	9
59	Subthreshold Behavior of Undoped DG MOSFETs. , 0, , .		8
60	An Explicit Analytic Compact Model for Nanocrystalline Zinc Oxide Thin-Film Transistors. IEEE Transactions on Electron Devices, 2012, 59, 46-50.	1.6	8
61	Conversion of solar to electrical energy utilizing the thermodielectric effect. Ferroelectrics, 1978, 22, 769-771.	0.3	7
62	CdS/pâ€¢Si solar cells made by serigraphy. Applied Physics Letters, 1988, 52, 1261-1263.	1.5	7
63	Calculating double-exponential diode model parameters from previously extracted single-exponential model parameters. Electronics Letters, 1995, 31, 71-72.	0.5	7
64	Analysis of the validity of methods for extracting the effective channel length of short-channel LDD MOSFETs. Solid-State Electronics, 1996, 39, 1093-1094.	0.8	7
65	Influence of polysilicon-gate depletion on the subthreshold behavior of submicron MOSFETs. Microelectronics Reliability, 2002, 42, 343-347.	0.9	7
66	Parameter extraction in polysilicon nanowire MOSFETs using new double integration-based procedure. Solid-State Electronics, 2010, 54, 635-641.	0.8	7
67	Parameter Extraction in Quadratic Exponential Junction Model with Series Resistance using Global Lateral Fitting. ECS Transactions, 2010, 31, 369-376.	0.3	7
68	Approximate analytical expression for the tersminal voltage in multi-exponential diode models. Solid-State Electronics, 2013, 89, 7-11.	0.8	7
69	Effects of high-level free-carrier injection on the base transit time of bipolar junction transistors. Solid-State Electronics, 1996, 39, 27-31.	0.8	6
70	A study of the validity of capacitance-based method for extracting the effective channel length of MOSFET's. IEEE Transactions on Electron Devices, 1997, 44, 340-343.	1.6	6
71	Drain and source resistances of short-channel LDD MOSFETs. Solid-State Electronics, 1997, 41, 778-780.	0.8	6
72	A new integration-based procedure to separately extract series resistance and mobility degradation in MOSFETs. Semiconductor Science and Technology, 2009, 24, 105015.	1.0	6

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73	Integration-based approach to evaluate the sub-threshold slope of MOSFETs. Microelectronics Reliability, 2010, 50, 312-315.	0.9	6
74	A Rigorous Classical Solution for the Drain Current of Doped Symmetric Double-Gate MOSFETs. IEEE Transactions on Electron Devices, 2012, 59, 2390-2395.	1.6	6
75	A procedure for the extraction of the bulk-charge effect parameter in MOSFET models. Solid-State Electronics, 1999, 43, 1295-1298.	0.8	5
76	An efficient and accurate procedure to evaluate distortion in SOI FD MOSFET. , 0, , .		5
77	On integration-based methods for MOSFET model parameter extraction. , 2008, , .		5
78	A continuous semi-empiric transfer characteristics model for surrounding gate undoped polysilicon nanowire MOSFETs. Solid-State Electronics, 2011, 63, 22-26.	0.8	5
79	Direct extraction of solar cell model parameters using optimization methods. , 2021, , .		5
80	Percentage Area Difference (PAD) as a measure of distortion and its use in Maximum Enclosed Area (MEA), a new ECG signal compression algorithm. , 0, , .		4
81	Comments on “A sinh Resistor and Its Application to tanh Linearization”. IEEE Journal of Solid-State Circuits, 2006, 41, 2359-2359.	3.5	4
82	A polylogarithmic model for thin-film transistors used in a CMOS inverter amplifier. Solid-State Electronics, 2022, 188, 108218.	0.8	4
83	Spray pyrolysis of ZnO thin films for photovoltaic applications: effect of gas flow rate and solute concentration. , 0, , .		3
84	Harmonic distortion in MOSFETs calculated by successive integration of the transfer characteristics. , 2008, , .		3
85	A formula for the central potentialâ€™s maximum magnitude in arbitrarily doped symmetric double-gate MOSFETs. Solid-State Electronics, 2012, 76, 112-115.	0.8	3
86	Systematic Characterization of Tunnel FETs Using a Universal Compact Model. IEEE Transactions on Electron Devices, 2015, 62, 3554-3559.	1.6	3
87	Transconductances of the long-channel silicon-on-insulator MOSFET. Solid-State Electronics, 1993, 36, 631-637.	0.8	2
88	A new method for extracting the effective channel length of MOSFETs. Microelectronics Reliability, 1998, 38, 1867-1870.	0.9	2
89	A method to evaluate the location of the maximum value of a function with high level of noise. Solid-State Electronics, 2003, 47, 93-97.	0.8	2
90	Postbreakdown Current in MOS Structures: Extraction of Parameters Using the Integral Difference Function Method. IEEE Transactions on Device and Materials Reliability, 2006, 6, 190-196.	1.5	2

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91	The development of integration-based methods to extract parameters of two-terminal device models. , 2008, , .		2
92	Extraction of MOSFET Model Parameters from the Measured Source-to-drain Resistance. ECS Transactions, 2009, 23, 353-360.	0.3	2
93	Characterization of Thin-Film SOI PIN Diodes from Cryogenic to Above Room Temperatures Using an Explicit I-V Multi-Branch Model. ECS Transactions, 2011, 39, 171-178.	0.3	2
94	Equivalent Circuit Models for Next Generation Photovoltaic Devices with S-shaped I-V Curves. , 2019, , .		2
95	On the Explicit Saturation Drain Current in the Generalized EKV Compact MOSFET Model. IEEE Transactions on Electron Devices, 2021, 68, 4813-4818.	1.6	2
96	A model for reverse short-channel effects in MOSFETs. , 0, , .		1
97	Design, optimization and fabrication of a tanh/sinh-type bipolar transconductor with maximum linearity. , 0, , .		1
98	Modeling the Post-Breakdown Current in MOS devices on p-silicon substrate. , 2006, , .		1
99	UNDOPED BODY SYMMETRIC DOUBLE GATE MOSFET MODELING. International Journal of High Speed Electronics and Systems, 2006, 16, 325-350.	0.3	1
100	A New Method for Polynomial Coefficient Extraction Applied to Harmonic Distortion Calculation. ECS Transactions, 2007, 9, 389-395.	0.3	1
101	Transformation Between Power-law and Polynomial Thin-Film Transistor Models. ECS Transactions, 2009, 23, 405-412.	0.3	1
102	Modeling of Thin-Film Lateral SOI PIN Diodes with an Alternative Multi-Branch Explicit Current Model. Journal of Integrated Circuits and Systems, 2012, 7, 92-99.	0.3	1
103	Utilizing photon-to-charge conversion in ferroelectrics for direct conversion of solar to electrical energy. Ferroelectrics, 1976, 10, 243-243.	0.3	0
104	On the reverse short-channel effects of submicron MOSFETs. , 0, , .		0
105	On the Threshold Voltage of Undoped Double-Gate SOI MOSFETs. ECS Transactions, 2007, 9, 75-84.	0.3	0
106	Compatibility of Co-Tunneling and Power-Law Models of Soft Breakdown Current in MOS Structures. , 2008, , .		0
107	On the extraction methods for MOSFET series resistance and mobility degradation using a single test device. , 2017, , .		0
108	Comments on â€œHighly Biased Linear Condition Method for Separately Extracting Source and Drain Resistance in MOSFETsâ€• IEEE Transactions on Electron Devices, 2018, 65, 4019-4021.	1.6	0

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109	UNDOPED BODY SYMMETRIC DOUBLE GATE MOSFET MODELING. , 2006, , .		0
110	Simplified EKV model parameter extraction in polysilicon MOSFETs. Solid-State Electronics, 2022, , 108403.	0.8	0