Angel Dieguez

List of Publications by Year
in descending order

113 papers	3,381 citations	331670 21 h-index	144013 57 g-index
113 all docs	113 docs citations	113 times ranked	4649 citing authors

#	Article	IF	Citations
1	The LHCb Detector at the LHC. Journal of Instrumentation, 2008, 3, S08005-S08005.	1.2	969
2	The complete Raman spectrum of nanometric SnO2 particles. Journal of Applied Physics, 2001, 90, 1550-1557.	2.5	686
3	Grain size control in nanocrystalline In2O3 semiconductor gas sensors. Sensors and Actuators B: Chemical, 1997, 44, 327-333.	7.8	231
4	Morphological analysis of nanocrystalline SnO2 for gas sensor applications. Sensors and Actuators B: Chemical, 1996, 31, 1-8.	7.8	195
5	Influence of the catalytic introduction procedure on the nano-SnO2 gas sensor performances. Sensors and Actuators B: Chemical, 2001, 79, 98-106.	7.8	162
6	Correlation between XPS, Raman and TEM measurements and the gas sensitivity of Pt and Pd doped SnO 2 based gas sensors. Fresenius' Journal of Analytical Chemistry, 1998, 361, 110-114.	1.5	116
7	Nanoparticle engineering for gas sensor optimisation: improved solâ€“gel fabricated nanocrystalline SnO2 thick film gas sensor for NO2 detection by calcination, catalytic metal introduction and grinding treatments. Sensors and Actuators B: Chemical, 1999, 60, 125-137.	7.8	97
8	The aging effect on SnO2â€“Au thin film sensors: electrical and structural characterization. Thin Solid Films, 2000, 371, 249-253.	1.8	89
9	Influence on the gas sensor performances of the metal chemical states introduced by impregnation of calcinated SnO2 solâ€“gel nanocrystals. Sensors and Actuators B: Chemical, 2000, 68, 94-99.	7.8	77
10	Microwave processing for the low cost, mass production of undoped and in situ catalytic doped nanosized SnO2 gas sensor powders. Sensors and Actuators B: Chemical, 2000, 64, 65-69.	7.8	59
11	Microstructure and morphology of tin dioxide multilayer thin film gas sensors. Sensors and Actuators B: Chemical, 1997, 44, 268-274.	7.8	51
12	Parameter optimisation in SnO2 gas sensors for NO2 detection with low cross-sensitivity to CO: solâ€“gel preparation, film preparation, powder calcination, doping and grinding. Sensors and Actuators B: Chemical, 2000, 65, 166-168.	7.8	44
13	Evaluation of building technology for mass producible millimetre-sized robots using flexible printed circuit boards. Journal of Micromechanics and Microengineering, 2009, 19, 075011.	2.6	37
14	New method to obtain stable small-sized SnO2 powders for gas sensors. Sensors and Actuators B: Chemical, 1999, 58, 360-364.	7.8	36
15	Nondestructive assessment of the grain size distribution of SnO2 nanoparticles by low-frequency Raman spectroscopy. Applied Physics Letters, 1997, 71, 1957-1959.	3.3	34
16	Influence of the completion of oxidation on the long-term response of RGTO SnO2 gas sensors. Sensors and Actuators B: Chemical, 2000, 66, 40-42.	7.8	34
17	Directly addressable GaN-based nano-LED arrays: fabrication and electro-optical characterization. Microsystems and Nanoengineering, 2020, 6, 88.	7.0	30
18	A Reusable Smart Interface for Gas Sensor Resistance Measurement. IEEE Transactions on Instrumentation and Measurement, 2004, 53, 1173-1178.	4.7	27

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19	A low-noise time-gated single-photon detector in a HV-CMOS technology for triggered imaging. Sensors and Actuators A: Physical, 2013, 201, 342-351.	4.1	25
20	3D integration of Geiger-mode avalanche photodiodes aimed to very high fill-factor pixels for future linear colliders. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2013, 731, 103-108.	1.6	23
21	Analysis of the Thermal Oxidation of Tin Droplets and Its Implications on Gas Sensor Stability. Journal of the Electrochemical Society, 1999, 146, 3527-3535.	2.9	22
22	DEPFET Active Pixel Detectors for a Future Linear $e^{+}e^{-}$ Collider. IEEE Transactions on Nuclear Science, 2013, 60, 1457-1465.	2.0	22
23	A gated single-photon avalanche diode array fabricated in a conventional CMOS process for triggered systems. Sensors and Actuators A: Physical, 2012, 186, 163-168.	4.1	20
24	A Monolithic Interface Circuit for Gas Sensor Arrays: Control and Measurement. Analog Integrated Circuits and Signal Processing, 2004, 40, 175-184.	1.4	18
25	Nano illumination microscopy: a technique based on scanning with an array of individually addressable nanoLEDs. Optics Express, 2020, 28, 19044.	3.4	18
26	Competitive evolution of the fine contrast modulation and CuPt ordering in InGaP/GaAs layers. Journal of Applied Physics, 1996, 80, 3798-3803.	2.5	14
27	A Point-of-Care Device for Molecular Diagnosis Based on CMOS SPAD Detectors with Integrated Microfluidics. Sensors, 2019, 19, 445.	3.8	14
28	Crosstalk-Free Single Photon Avalanche Photodiodes Located in a Shared Well. IEEE Electron Device Letters, 2014, 35, 99-101.	3.9	13
29	An internet of things-based intensity and time-resolved fluorescence reader for point-of-care testing. Biosensors and Bioelectronics, 2020, 154, 112074.	10.1	13
30	Low-noise pixel detectors based on gated Geiger mode avalanche photodiodes. Electronics Letters, 2011, 47, 397.	1.0	10
31	Design and validation of the control circuits for a micro-cantilever tool for a micro-robot. Sensors and Actuators A: Physical, 2009, 153, 76-83.	4.1	9
32	Characterization and simulation of Avalanche PhotoDiodes for next-generation colliders. Sensors and Actuators A: Physical, 2011, 172, 181-188.	4.1	9
33	Advancing towards smart endoscopy with specific electronics to enable locomotion and focusing capabilities in a wireless endoscopic capsule robot. , 2009, , .		8
34	A low cost fluorescence lifetime measurement system based on SPAD detectors and FPGA processing. Journal of Instrumentation, 2017, 12, C02070-C02070.	1.2	8
35	A Compact Analog Histogramming SPAD-Based CMOS Chip for Time-Resolved Fluorescence. IEEE Transactions on Biomedical Circuits and Systems, 2019, 13, 343-351.	4.0	8
36	Structural analysis of InGaAs tensile layers on InP. Materials Science and Technology, 1996, 12, 190-192.	1.6	7

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37	A Specific Integrated Controller for Nanomicroscopy and Cellular Manipulation. , 0, , .		7
38	Design of a brushless micro motor driver for a locomotive endoscopic capsule. , 2008, , .		6
39	An Optically Programmable SoC for an Autonomous Mobile mm^{3}-Sized Microrobot. IEEE Transactions on Circuits and Systems I: Regular Papers, 2011, 58, 2673-2685.	5.4	6
40	Readout schemes for low noise single-photon avalanche diodes fabricated in conventional HV-CMOS technologies. Microelectronics Journal, 2013, 44, 941-947.	2.0	6
41	Dynamic range extension of SiPM detectors with the time-gated operation. Optics Express, 2014, 22, 12007.	3.4	6
42	A Wake-Up Circuit With Temperature Compensated Clock In 1.2V-0.13Â¿m CMOS Technology. , 2007, , .		5
43	High voltage vs. high integration: a comparison between CMOS technologies for SPAD cameras. , 2010, , .		5
44	Noise Analysis of Time Variant Shapers in Frequency Domain. IEEE Transactions on Nuclear Science, 2011, 58, 177-186.	2.0	5
45	Processing and Characterization of Monolithic Passive-Matrix GaN-Based MicroLED Arrays With Pixel Sizes From 5 to 50 Âµm. IEEE Photonics Journal, 2021, 13, 1-9.	2.0	5
46	Study of Geiger avalanche photo-diodes (GAPDs) applications to pixel tracking detectors. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2010, 617, 541-542.	1.6	4
47	Readout electronics for low dark count pixel detectors based on Geiger mode avalanche photodiodes fabricated in conventional CMOS technologies for future linear colliders. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2011, 650, 120-124.	1.6	4
48	Dynamic Range Extension of a SPAD Imager Using Non-Uniformity Correction Techniques. IEEE Sensors Journal, 2016, 16, 2988-2992.	4.7	4
49	Pursuing the Diffraction Limit with Nano-LED Scanning Transmission Optical Microscopy. Sensors, 2021, 21, 3305.	3.8	4
50	Individually Switchable InGaN/GaN Nano-LED Arrays as Highly Resolved Illumination Engines. Electronics (Switzerland), 2021, 10, 1829.	3.1	4
51	A Compact Raster Lensless Microscope Based on a Microdisplay. Sensors, 2021, 21, 5941.	3.8	4
52	An ultra low power IC for an autonomous mm³-sized microrobot. , 2007, , .		3
53	Integration of the control electronics for a mm³-sized autonomous microrobot into a single chip. , 2009, , .		3
54	Avalanche photodiodes for high energy particle tracking in 130 nm CMOS technology. , 2009, , .		3

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55	Comparison between technologies for APDs fabrication in particle detectors. Procedia Engineering, 2010, 5, 677-680.	1.2	3
56	Control electronics integration toward endoscopic capsule robot performing legged locomotion and illumination. , 2010, , .		3
57	Readout electronics for low dark count Geiger mode avalanche photodiodes fabricated in conventional HV-CMOS technologies for future linear colliders. Journal of Instrumentation, 2011, 6, C01015-C01015.	1.2	3
58	A test beam setup for the characterization of the Geiger-mode avalanche photodiode technology for particle tracking. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2012, 694, 199-204.	1.6	3
59	A low cost fluorescence lifetime measurement system based on SPAD detectors and FPGA processing. , 2016, , .		3
60	Report on recent activities in HV-CMOS detectors for Mu3e, ATLAS and RD50. Journal of Instrumentation, 2018, 13, C07002-C07002.	1.2	3
61	Belle II Pixel Detector Commissioning and Operational Experience. , 2020, , .		3
62	Integrated Electronics for a 1cm3 Robot for Micro and Nanomanipulation Applications: MiCRoN. , 0, , .		2
63	A SoC for studying multi-agent software/algorithms on a real swarm of mm3-sized microrobots. , 2007, , .		2
64	Design and control of a micro-cantilever tool for micro-robot contact sensing. , 2007, , .		2
65	Enabling swarm behavior in mm³-sized robots with specific designed integrated electronics. , 2007, , .		2
66	Control electronics integration toward endoscopic capsule robot performing legged locomotion and illumination. , 2010, , .		2
67	Enabling multiple robotic functions in an endoscopic capsule for the entire gastrointestinal tract exploration. , 2010, , .		2
68	Gated Geiger mode avalanche photodiode pixels with integrated readout electronics for low noise photon detection. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2012, 695, 218-221.	1.6	2
69	Secondary particle acquisition system for the CERN beam wire scanners upgrade. Journal of Instrumentation, 2015, 10, C04021-C04021.	1.2	2
70	A Verilog-A model for the design of devices for fluorescence life-time measurement with CMOS SPADs. , 2015, , .		2
71	A System-on-Chip Solution for a Low Power Active Capsule Endoscope with Therapeutic Capabilities for Clip Application in the Gastrointestinal Tract. Journal of Medical Robotics Research, 2017, 02, 1750005.	1.2	2
72	Towards a super-resolution structured illumination microscope based on an array of nanoLEDs. , 2019, , .		2

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73	Investigation of roughness and defect nucleation anisotropies on tensile InxGa1 â˜ xAs/In(P001). Materials Letters, 1997, 32, 103-107.	2.6	1
74	Structural analysis of buried conducting CoSi2 layers formed in Si by high-dose Co ion implantation. Journal of Crystal Growth, 1998, 187, 435-443.	1.5	1
75	<title>An integrated controller for a flexible and wireless atomic force microscopy</title>. , 2005, , .		1
76	A monolithic control circuit for a 1cm3 microrobot for biological experiments. , 2005, , .		1
77	A low power IC to enable optical communications in a robotic swarm. Midwest Symposium on Circuits and Systems, 2007, , .	1.0	1
78	An optically programmable SoC for an autonomous mm³-sized microrobot. , 2009, , .		1
79	A new procedure and driver to control brushless micromotors. , 2009, , .		1
80	SEM/FIB for characterization of nanosized imagers. Procedia Engineering, 2010, 5, 697-700.	1.2	1
81	FIB-SEM as a tool for characterizing single-photon detectors. Proceedings of SPIE, 2010, , .	0.8	1
82	Avoiding sensor blindness in Geiger mode avalanche photodiode arrays fabricated in a conventional CMOS process. Journal of Instrumentation, 2011, 6, C12005-C12005.	1.2	1
83	Active gating as a method to inhibit the crosstalk of single photon avalanche diodes in a shared well. Proceedings of SPIE, 2013, , .	0.8	1
84	Characterization of Linear-mode Avalanche Photodiodes in Standard CMOS. Procedia Engineering, 2014, 87, 728-731.	1.2	1
85	Strategies for using GAPDs as tracker detectors in future linear colliders. Nuclear and Particle Physics Proceedings, 2016, 273-275, 1072-1078.	0.5	1
86	A Portable Fluorescence Lifetime Spectroscopy Detector for Molecular Diagnosis. Proceedings (mdpi), 2017, 1, 758.	0.2	1
87	A 28 Î¼W timing circuit for a 60 Î¼m² HV-CMOS pixel. , 2019, , .		1
88	Belle II pixel detector: Performance of final DEPFET modules. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2020, 958, 162222.	1.6	1
89	A Novel Approach for a Chip-Sized Scanning Optical Microscope. Micromachines, 2021, 12, 527.	2.9	1
90	Control Electronics Integration toward Endoscopic Capsule Robot Performing Legged Locomotion and Illumination. International Federation for Information Processing, 2012, , 312-338.	0.4	1

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91	Multiclock Domain and Dynamic Frequency Scaling Applied to the Control Unit of a Battery Powered for 1 cm³ Microrobot. Journal of Low Power Electronics, 2006, 2, 291-299.	0.6	1
92	A mixed-mode interface circuit for gas sensor control and measure. , 0, , .		0
93	A Digital Control Circuit for a Biomedical Microrobot. , 2005, , .		0
94	An Ultra Low Power Successive Approximation ADC with Selectable Resolution in 0.13 μm CMOS Technology. , 2006, , .		0
95	Design and test of a digital system based on a CMOS 0.35μm logarithmic pixel for time of flight measurement applications. , 2007, , .		0
96	Design and test of a digital system based on a CMOS 0.35Â¿m logarithmic pixel for pulsed laser optical detection. , 2007, , .		0
97	A 1 mW low power SoC for a mm³-sized microrobot. Midwest Symposium on Circuits and Systems, 2007, , .	1.0	0
98	Architecture of the integrated electronics for a wireless endoscopic capsule with locomotive and sensing and actuating capabilities. , 2008, , .		0
99	Control electronics in an endoscopic capsule with locomotive, sensing, and actuating capabilities. Proceedings of SPIE, 2009, , .	0.8	0
100	Equalizing noise characteristics in Geiger mode avalanche photodiodes by using gated operation. Procedia Engineering, 2011, 25, 1253-1256.	1.2	0
101	Modeling in Verilog-AMS of a front-end for the design of a multichannel readout ASIC for Si microstrips. , 2012, , .		0
102	Time-gated operation as an effective method to reduce the threshold event of SiPMs. Sensors and Actuators A: Physical, 2014, 213, 59-62.	4.1	0
103	A Verilog-A model of a silicon resistive strip for particle detectors. , 2016, , .		0
104	High dynamic range diamond detector acquisition system for beam wire scanner applications. Journal of Instrumentation, 2016, 11, C03008-C03008.	1.2	0
105	Readout electronics for the silicon micro-strip detector of the ILD concept. Nuclear and Particle Physics Proceedings, 2016, 273-275, 2548-2550.	0.5	0
106	Readout electronics for LGAD sensors. Journal of Instrumentation, 2017, 12, C02069-C02069.	1.2	0
107	The BelleÂII vertex detector integration. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2019, 936, 616-620.	1.6	0
108	DEPFET pixel detector in the Belle II experiment. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2019, 936, 657-659.	1.6	0

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109	ChipScope Symposium: Novel Approaches for a Chip-Sized Optical Microscope. Proceedings (mdpi), 2020, 56, 5.	0.2	0
110	Low Dark Count Geiger Mode Avalanche Photodiodes Fabricated in Conventional CMOS Technologies. Sensor Letters, 2011, 9, 2408-2411.	0.4	0
111	SPADs for Vertex Tracker detectors in Future Colliders. , 2014, , .		0
112	Mejora de la implicaciÃ³n del alumnado en â€œDiseÃ±o y sÃntesis de sistemas digitalesâ€•usando e-learning colaborativo, gamificaciÃ³n y aprendizaje basado en problemas. , 0, , .		0
113	24â€1: Can Light Microscopes Really Be Chipâ€Sized?. Digest of Technical Papers SID International Symposium, 2022, 53, 271-274.	0.3	0