

# Angel Dieguez

## List of Publications by Year in descending order

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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	24â€¹: Can Light Microscopes Really Be Chipâ€­Sized?. Digest of Technical Papers SID International Symposium, 2022, 53, 271-274.	0.3	0
2	A Novel Approach for a Chip-Sized Scanning Optical Microscope. Micromachines, 2021, 12, 527.	2.9	1
3	Pursuing the Diffraction Limit with Nano-LED Scanning Transmission Optical Microscopy. Sensors, 2021, 21, 3305.	3.8	4
4	Individually Switchable InGaN/GaN Nano-LED Arrays as Highly Resolved Illumination Engines. Electronics (Switzerland), 2021, 10, 1829.	3.1	4
5	A Compact Raster Lensless Microscope Based on a Microdisplay. Sensors, 2021, 21, 5941.	3.8	4
6	Processing and Characterization of Monolithic Passive-Matrix GaN-Based MicroLED Arrays With Pixel Sizes From 5 to 50 Åµm. IEEE Photonics Journal, 2021, 13, 1-9.	2.0	5
7	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
8	Directly addressable GaN-based nano-LED arrays: fabrication and electro-optical characterization. Microsystems and Nanoengineering, 2020, 6, 88.	7.0	30
9	ChipScope Symposium: Novel Approaches for a Chip-Sized Optical Microscope. Proceedings (mdpi), 2020, 56, 5.	0.2	0
10	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
11	Nano illumination microscopy: a technique based on scanning with an array of individually addressable nanoLEDs. Optics Express, 2020, 28, 19044.	3.4	18
12	Belle II Pixel Detector Commissioning and Operational Experience. , 2020, , .		3
13	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
14	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
15	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
16	A Point-of-Care Device for Molecular Diagnosis Based on CMOS SPAD Detectors with Integrated Microfluidics. Sensors, 2019, 19, 445.	3.8	14
17	A 28 Î¼W timing circuit for a 60 Î¼m <sup>2</sup> HV-CMOS pixel. , 2019, , .		1
18	Towards a super-resolution structured illumination microscope based on an array of nanoLEDs. , 2019, , .		2

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19	Report on recent activities in HV-CMOS detectors for Mu3e, ATLAS and RD50. Journal of Instrumentation, 2018, 13, C07002-C07002.	1.2	3
20	A low cost fluorescence lifetime measurement system based on SPAD detectors and FPGA processing. Journal of Instrumentation, 2017, 12, C02070-C02070.	1.2	8
21	Readout electronics for LGAD sensors. Journal of Instrumentation, 2017, 12, C02069-C02069.	1.2	0
22	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
23	A Portable Fluorescence Lifetime Spectroscopy Detector for Molecular Diagnosis. Proceedings (mdpi), 2017, 1, 758.	0.2	1
24	A Verilog-A model of a silicon resistive strip for particle detectors. , 2016, , .		0
25	A low cost fluorescence lifetime measurement system based on SPAD detectors and FPGA processing. , 2016, , .		3
26	High dynamic range diamond detector acquisition system for beam wire scanner applications. Journal of Instrumentation, 2016, 11, C03008-C03008.	1.2	0
27	Strategies for using GAPDs as tracker detectors in future linear colliders. Nuclear and Particle Physics Proceedings, 2016, 273-275, 1072-1078.	0.5	1
28	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
29	Dynamic Range Extension of a SPAD Imager Using Non-Uniformity Correction Techniques. IEEE Sensors Journal, 2016, 16, 2988-2992.	4.7	4
30	Secondary particle acquisition system for the CERN beam wire scanners upgrade. Journal of Instrumentation, 2015, 10, C04021-C04021.	1.2	2
31	A Verilog-A model for the design of devices for fluorescence life-time measurement with CMOS SPADs. , 2015, , .		2
32	Characterization of Linear-mode Avalanche Photodiodes in Standard CMOS. Procedia Engineering, 2014, 87, 728-731.	1.2	1
33	Dynamic range extension of SiPM detectors with the time-gated operation. Optics Express, 2014, 22, 12007.	3.4	6
34	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
35	Crosstalk-Free Single Photon Avalanche Photodiodes Located in a Shared Well. IEEE Electron Device Letters, 2014, 35, 99-101.	3.9	13
36	SPADs for Vertex Tracker detectors in Future Colliders. , 2014, , .		0

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37	DEPFET Active Pixel Detectors for a Future Linear $e^+e^-$ Collider. IEEE Transactions on Nuclear Science, 2013, 60, 1457-1465.	2.0	22
38	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
39	Readout schemes for low noise single-photon avalanche diodes fabricated in conventional HV-CMOS technologies. Microelectronics Journal, 2013, 44, 941-947.	2.0	6
40	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
41	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
42	Modeling in Verilog-AMS of a front-end for the design of a multichannel readout ASIC for Si microstrips. , 2012, , .		0
43	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
44	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
45	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
46	Control Electronics Integration toward Endoscopic Capsule Robot Performing Legged Locomotion and Illumination. International Federation for Information Processing, 2012, , 312-338.	0.4	1
47	Equalizing noise characteristics in Geiger mode avalanche photodiodes by using gated operation. Procedia Engineering, 2011, 25, 1253-1256.	1.2	0
48	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
49	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
50	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
51	Characterization and simulation of Avalanche PhotoDiodes for next-generation colliders. Sensors and Actuators A: Physical, 2011, 172, 181-188.	4.1	9
52	Noise Analysis of Time Variant Shapers in Frequency Domain. IEEE Transactions on Nuclear Science, 2011, 58, 177-186.	2.0	5
53	An Optically Programmable SoC for an Autonomous Mobile mm <sup>3</sup> -Sized Microrobot. IEEE Transactions on Circuits and Systems I: Regular Papers, 2011, 58, 2673-2685.	5.4	6
54	Low-noise pixel detectors based on gated Geiger mode avalanche photodiodes. Electronics Letters, 2011, 47, 397.	1.0	10

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55	Low Dark Count Geiger Mode Avalanche Photodiodes Fabricated in Conventional CMOS Technologies. Sensor Letters, 2011, 9, 2408-2411.	0.4	0
56	Comparison between technologies for APDs fabrication in particle detectors. Procedia Engineering, 2010, 5, 677-680.	1.2	3
57	SEM/FIB for characterization of nanosized imagers. Procedia Engineering, 2010, 5, 697-700.	1.2	1
58	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
59	High voltage vs. high integration: a comparison between CMOS technologies for SPAD cameras. , 2010, , .		5
60	Control electronics integration toward endoscopic capsule robot performing legged locomotion and illumination. , 2010, , .		3
61	Control electronics integration toward endoscopic capsule robot performing legged locomotion and illumination. , 2010, , .		2
62	FIB-SEM as a tool for characterizing single-photon detectors. Proceedings of SPIE, 2010, , .	0.8	1
63	Enabling multiple robotic functions in an endoscopic capsule for the entire gastrointestinal tract exploration. , 2010, , .		2
64	Integration of the control electronics for a mm<sup>3</sup>-sized autonomous microrobot into a single chip. , 2009, , .		3
65	Avalanche photodiodes for high energy particle tracking in 130 nm CMOS technology. , 2009, , .		3
66	An optically programmable SoC for an autonomous mm<sup>3</sup>-sized microrobot. , 2009, , .		1
67	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
68	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
69	Advancing towards smart endoscopy with specific electronics to enable locomotion and focusing capabilities in a wireless endoscopic capsule robot. , 2009, , .		8
70	A new procedure and driver to control brushless micromotors. , 2009, , .		1
71	Control electronics in an endoscopic capsule with locomotive, sensing, and actuating capabilities. Proceedings of SPIE, 2009, , .	0.8	0
72	The LHCb Detector at the LHC. Journal of Instrumentation, 2008, 3, S08005-S08005.	1.2	969

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73	Architecture of the integrated electronics for a wireless endoscopic capsule with locomotive and sensing and actuating capabilities. , 2008, , .		0
74	Design of a brushless micro motor driver for a locomotive endoscopic capsule. , 2008, , .		6
75	Design and test of a digital system based on a CMOS 0.35 $\mu$ m logarithmic pixel for time of flight measurement applications. , 2007, , .		0
76	A low power IC to enable optical communications in a robotic swarm. Midwest Symposium on Circuits and Systems, 2007, , .	1.0	1
77	A SoC for studying multi-agent software/algorithms on a real swarm of mm <sup>3</sup> -sized microrobots. , 2007, , .		2
78	Design and control of a micro-cantilever tool for micro-robot contact sensing. , 2007, , .		2
79	A Wake-Up Circuit With Temperature Compensated Clock In 1.2V-0.13 $\mu$ m CMOS Technology. , 2007, , .		5
80	An ultra low power IC for an autonomous mm <sup>3</sup> -sized microrobot. , 2007, , .		3
81	Enabling swarm behavior in mm <sup>3</sup> -sized robots with specific designed integrated electronics. , 2007, , .		2
82	Design and test of a digital system based on a CMOS 0.35 $\mu$ m logarithmic pixel for pulsed laser optical detection. , 2007, , .		0
83	A 1 mW low power SoC for a mm <sup>3</sup> -sized microrobot. Midwest Symposium on Circuits and Systems, 2007, , .	1.0	0
84	An Ultra Low Power Successive Approximation ADC with Selectable Resolution in 0.13 $\mu$ m CMOS Technology. , 2006, , .		0
85	Multiclock Domain and Dynamic Frequency Scaling Applied to the Control Unit of a Battery Powered for 1 cm <sup>3</sup> Microrobot. Journal of Low Power Electronics, 2006, 2, 291-299.	0.6	1
86	<title>An integrated controller for a flexible and wireless atomic force microscopy</title>. , 2005, , .		1
87	A Digital Control Circuit for a Biomedical Microrobot. , 2005, , .		0
88	A monolithic control circuit for a 1cm <sup>3</sup> microrobot for biological experiments. , 2005, , .		1
89	A Reusable Smart Interface for Gas Sensor Resistance Measurement. IEEE Transactions on Instrumentation and Measurement, 2004, 53, 1173-1178.	4.7	27
90	A Monolithic Interface Circuit for Gas Sensor Arrays: Control and Measurement. Analog Integrated Circuits and Signal Processing, 2004, 40, 175-184.	1.4	18

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91	The complete Raman spectrum of nanometric SnO <sub>2</sub> particles. Journal of Applied Physics, 2001, 90, 1550-1557.	2.5	686
92	Influence of the catalytic introduction procedure on the nano-SnO <sub>2</sub> gas sensor performances. Sensors and Actuators B: Chemical, 2001, 79, 98-106.	7.8	162
93	The aging effect on SnO <sub>2</sub> /Au thin film sensors: electrical and structural characterization. Thin Solid Films, 2000, 371, 249-253.	1.8	89
94	Parameter optimisation in SnO <sub>2</sub> gas sensors for NO <sub>2</sub> detection with low cross-sensitivity to CO: sol-gel preparation, film preparation, powder calcination, doping and grinding. Sensors and Actuators B: Chemical, 2000, 65, 166-168.	7.8	44
95	Microwave processing for the low cost, mass production of undoped and in situ catalytic doped nanosized SnO <sub>2</sub> gas sensor powders. Sensors and Actuators B: Chemical, 2000, 64, 65-69.	7.8	59
96	Influence on the gas sensor performances of the metal chemical states introduced by impregnation of calcinated SnO <sub>2</sub> sol-gel nanocrystals. Sensors and Actuators B: Chemical, 2000, 68, 94-99.	7.8	77
97	Influence of the completion of oxidation on the long-term response of RGTO SnO <sub>2</sub> gas sensors. Sensors and Actuators B: Chemical, 2000, 66, 40-42.	7.8	34
98	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
99	New method to obtain stable small-sized SnO <sub>2</sub> powders for gas sensors. Sensors and Actuators B: Chemical, 1999, 58, 360-364.	7.8	36
100	Nanoparticle engineering for gas sensor optimisation: improved sol-gel fabricated nanocrystalline SnO <sub>2</sub> thick film gas sensor for NO <sub>2</sub> detection by calcination, catalytic metal introduction and grinding treatments. Sensors and Actuators B: Chemical, 1999, 60, 125-137.	7.8	97
101	Structural analysis of buried conducting CoSi <sub>2</sub> layers formed in Si by high-dose Co ion implantation. Journal of Crystal Growth, 1998, 187, 435-443.	1.5	1
102	Correlation between XPS, Raman and TEM measurements and the gas sensitivity of Pt and Pd doped SnO <sub>2</sub> based gas sensors. Fresenius' Journal of Analytical Chemistry, 1998, 361, 110-114.	1.5	116
103	Nondestructive assessment of the grain size distribution of SnO <sub>2</sub> nanoparticles by low-frequency Raman spectroscopy. Applied Physics Letters, 1997, 71, 1957-1959.	3.3	34
104	Investigation of roughness and defect nucleation anisotropies on tensile In <sub>x</sub> Ga <sub>1-x</sub> As/In(P001). Materials Letters, 1997, 32, 103-107.	2.6	1
105	Grain size control in nanocrystalline In <sub>2</sub> O <sub>3</sub> semiconductor gas sensors. Sensors and Actuators B: Chemical, 1997, 44, 327-333.	7.8	231
106	Microstructure and morphology of tin dioxide multilayer thin film gas sensors. Sensors and Actuators B: Chemical, 1997, 44, 268-274.	7.8	51
107	Structural analysis of InGaAs tensile layers on InP. Materials Science and Technology, 1996, 12, 190-192.	1.6	7
108	Morphological analysis of nanocrystalline SnO <sub>2</sub> for gas sensor applications. Sensors and Actuators B: Chemical, 1996, 31, 1-8.	7.8	195

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109	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
110	A mixed-mode interface circuit for gas sensor control and measure. , 0, , .		0
111	A Specific Integrated Controller for Nanomicroscopy and Cellular Manipulation. , 0, , .		7
112	Integrated Electronics for a 1cm3 Robot for Micro and Nanomanipulation Applications: MiCRoN. , 0, , .		2
113	Mejora de la implicaci3n del alumnado en "Diseno y sntesis de sistemas digitales" usando e-learning colaborativo, gamificaci3n y aprendizaje basado en problemas. , 0, , .		0