

# Davide Calestani

## List of Publications by Year in descending order

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100  
papers

2,638  
citations

186209

28  
h-index

197736

49  
g-index

103  
all docs

103  
docs citations

103  
times ranked

4001  
citing authors

#	ARTICLE	IF	CITATIONS
1	Growth of ZnO tetrapods for nanostructure-based gas sensors. <i>Sensors and Actuators B: Chemical</i> , 2010, 144, 472-478.	4.0	175
2	ZnO gas sensors: A comparison between nanoparticles and nanotetrapods-based thick films. <i>Sensors and Actuators B: Chemical</i> , 2009, 137, 164-169.	4.0	151
3	Zn vacancy induced green luminescence on non-polar surfaces in ZnO nanostructures. <i>Scientific Reports</i> , 2014, 4, 5158.	1.6	144
4	Tin oxide nanobelts electrical and sensing properties. <i>Sensors and Actuators B: Chemical</i> , 2005, 111-112, 2-6.	4.0	112
5	Human stress monitoring through an organic cotton-fiber biosensor. <i>Journal of Materials Chemistry B</i> , 2014, 2, 5620-5626.	2.9	107
6	A single cotton fiber organic electrochemical transistor for liquid electrolyte saline sensing. <i>Journal of Materials Chemistry</i> , 2012, 22, 23830.	6.7	99
7	Aldehyde detection by ZnO tetrapod-based gas sensors. <i>Journal of Materials Chemistry</i> , 2011, 21, 15532.	6.7	85
8	Low-temperature $\text{In}_2\text{O}_3$ nanowire luminescence properties as a function of oxidizing thermal treatments. <i>Nanotechnology</i> , 2007, 18, 355707.	1.3	78
9	Structural and optical study of $\text{SnO}_2$ nanobelts and nanowires. <i>Materials Science and Engineering C</i> , 2005, 25, 625-630.	3.8	75
10	Influence of the Synthetic Procedures on the Structural and Optical Properties of Mixed-Halide (Br, I) Perovskite Films. <i>Journal of Physical Chemistry C</i> , 2015, 119, 21304-21313.	1.5	71
11	Morphological, structural and optical study of quasi-1D $\text{SnO}_2$ nanowires and nanobelts. <i>Crystal Research and Technology</i> , 2005, 40, 937-941.	0.6	69
12	$\text{NO}_2$ Gas Sensing Mechanism of ZnO Thin-Film Transducers: Physical Experiment and Theoretical Correlation Study. <i>ACS Sensors</i> , 2016, 1, 406-412.	4.0	65
13	ZnS and ZnO Nanosheets from $\text{ZnS}(\text{en})_{0.5}$ Precursor: Nanoscale Structure and Photocatalytic Properties. <i>Journal of Physical Chemistry C</i> , 2012, 116, 6960-6965.	1.5	63
14	Analytical approaches for the characterization and quantification of nanoparticles in food and beverages. <i>Analytical and Bioanalytical Chemistry</i> , 2017, 409, 63-80.	1.9	57
15	Role of the substrates in the ribbon orientation of $\text{Sb}_2\text{Se}_3$ films grown by Low-Temperature Pulsed Electron Deposition. <i>Solar Energy Materials and Solar Cells</i> , 2020, 218, 110724.	3.0	50
16	Unpredicted Nucleation of Extended Zinc Blende Phases in Wurtzite ZnO Nanotetrapod Arms. <i>ACS Nano</i> , 2009, 3, 3158-3164.	7.3	49
17	15% efficient $\text{Cu}(\text{In,Ga})\text{Se}_2$ solar cells obtained by low-temperature pulsed electron deposition. <i>Applied Physics Letters</i> , 2012, 101, .	1.5	49
18	Enzymatic sensing with laccase-functionalized textile organic biosensors. <i>Organic Electronics</i> , 2017, 40, 51-57.	1.4	49

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19	Low temperature thermal evaporation growth of aligned ZnO nanorods on ZnO film: a growth mechanism promoted by Zn nanoclusters on polar surfaces. <i>CrystEngComm</i> , 2011, 13, 1707-1712.	1.3	44
20	Nucleation and growth of SnO <sub>2</sub> nanowires. <i>Journal of Crystal Growth</i> , 2005, 275, e2083-e2087.	0.7	43
21	Extended functionality of ZnO nanotetrapods by solution-based coupling with CdS nanoparticles. <i>Journal of Materials Chemistry</i> , 2012, 22, 5694.	6.7	42
22	Full encapsulated CdZnTe crystals by the vertical Bridgman method. <i>Journal of Crystal Growth</i> , 2008, 310, 2072-2075.	0.7	39
23	Boron Oxide Encapsulated Vertical Bridgman Grown CdZnTe Crystals as X-Ray Detector Material. <i>IEEE Transactions on Nuclear Science</i> , 2009, 56, 1743-1746.	1.2	38
24	Large-area self-catalysed and selective growth of ZnO nanowires. <i>Nanotechnology</i> , 2008, 19, 325603.	1.3	36
25	Effect of grain-size on the ethanol vapor sensing properties of room-temperature sputtered ZnO thin films. <i>Mikrochimica Acta</i> , 2015, 182, 1991-1999.	2.5	36
26	Growth and Characterization of CZT Crystals by the Vertical Bridgman Method for X-Ray Detector Applications. <i>IEEE Transactions on Nuclear Science</i> , 2011, 58, 2352-2356.	1.2	35
27	Branched gold nanoparticles on ZnO 3D architecture as biomedical SERS sensors. <i>RSC Advances</i> , 2015, 5, 93644-93651.	1.7	30
28	Development of a combined SEM and ICP-MS approach for the qualitative and quantitative analyses of metal microparticles and sub-microparticles in food products. <i>Analytical and Bioanalytical Chemistry</i> , 2011, 401, 1401-1409.	1.9	28
29	Mesoporous single-crystal ZnO nanobelts: supported preparation and patterning. <i>Nanoscale</i> , 2013, 5, 1060-1066.	2.8	28
30	All-Inorganic CsPbBr <sub>3</sub> Perovskite Films Prepared by Single Source Thermal Ablation. <i>Frontiers in Chemistry</i> , 2020, 8, 313.	1.8	28
31	Nanoscale mapping of plasmon and exciton in ZnO tetrapods coupled with Au nanoparticles. <i>Scientific Reports</i> , 2016, 6, 19168.	1.6	27
32	In-catalyzed growth of high-purity indium oxide nanowires. <i>Chemical Physics Letters</i> , 2007, 445, 251-254.	1.2	26
33	Growth of tin oxide nanocrystals. <i>Crystal Research and Technology</i> , 2005, 40, 932-936.	0.6	23
34	Strong mechanical adhesion of gold electroless contacts on CdZnTe deposited by alcoholic solutions. <i>Journal of Instrumentation</i> , 2017, 12, P02018-P02018.	0.5	23
35	Silica diatom shells tailored with Au nanoparticles enable sensitive analysis of molecules for biological, safety and environment applications. <i>Nanoscale Research Letters</i> , 2018, 13, 94.	3.1	23
36	Progress on Low-Temperature Pulsed Electron Deposition of CuInGaSe <sub>2</sub> Solar Cells. <i>Energies</i> , 2016, 9, 207.	1.6	21

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37	Modeling, Fabrication and Testing of a Customizable Micromachined Hotplate for Sensor Applications. <i>Sensors</i> , 2017, 17, 62.	2.1	21
38	Solution-free and catalyst-free synthesis of ZnO-based nanostructured TCOs by PED and vapor phase growth techniques. <i>Nanotechnology</i> , 2012, 23, 194008.	1.3	20
39	Low Temperature Sensing Properties of a Nano Hybrid Material Based on ZnO Nanotetrapods and Titanyl Phthalocyanine. <i>Sensors</i> , 2013, 13, 3445-3453.	2.1	20
40	Microtexturing of the Conductive PEDOT:PSS Polymer for Superhydrophobic Organic Electrochemical Transistors. <i>BioMed Research International</i> , 2014, 2014, 1-10.	0.9	19
41	Selective response inversion to NO <sub>2</sub> and acetic acid in ZnO and CdS nanocomposite gas sensor. <i>Nanotechnology</i> , 2014, 25, 365502.	1.3	19
42	Low concentration CO gas sensing properties of hybrid ZnO architecture. <i>Microelectronic Engineering</i> , 2016, 160, 12-17.	1.1	18
43	Martensite-enabled magnetic flexibility: The effects of post-growth treatments in magnetic-shape-memory Heusler thin films. <i>Acta Materialia</i> , 2020, 187, 135-145.	3.8	18
44	Effect of humidity on the a.c. impedance of CH <sub>3</sub> NH <sub>3</sub> SnCl <sub>3</sub> hybrid films. <i>Applied Physics A: Materials Science and Processing</i> , 2011, 104, 1181-1187.	1.1	17
45	Composite multifunctional nanostructures based on ZnO tetrapods and superparamagnetic Fe <sub>3</sub> O <sub>4</sub> nanoparticles. <i>Nanotechnology</i> , 2013, 24, 135601.	1.3	17
46	A new method to integrate ZnO nano-tetrapods on MEMS micro-hotplates for large scale gas sensor production. <i>Nanotechnology</i> , 2016, 27, 385503.	1.3	17
47	Smart composites materials: A new idea to add gas-sensing properties to commercial carbon-fibers by functionalization with ZnO nanowires. <i>Sensors and Actuators B: Chemical</i> , 2017, 245, 166-170.	4.0	17
48	Single crystal mesoporous ZnO platelets as efficient photoanodes for sensitized solar cells. <i>Solar Energy Materials and Solar Cells</i> , 2017, 168, 227-233.	3.0	17
49	Functionalization of carbon fiber tows with ZnO nanorods for stress sensor integration in smart composite materials. <i>Nanotechnology</i> , 2018, 29, 335501.	1.3	16
50	Vapor-phase growth, purification and large-area deposition of ZnO tetrapod nanostructures. <i>Crystal Research and Technology</i> , 2010, 45, 667-671.	0.6	14
51	Solvothermal synthesis of ZnS[C <sub>2</sub> H <sub>4</sub> (NH <sub>2</sub> ) <sub>2</sub> ] <sub>0.5</sub> nanosheets. <i>Crystal Research and Technology</i> , 2011, 46, 818-822.	0.6	14
52	Electrical properties of Au/CdZnTe/Au detectors grown by the boron oxide encapsulated Vertical Bridgman technique. <i>Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment</i> , 2016, 830, 243-250.	0.7	14
53	Live-monitoring of Te inclusions laser-induced thermo-diffusion and annealing in CdZnTe crystals. <i>Applied Physics Letters</i> , 2014, 104, .	1.5	13
54	A first principle method to simulate the spectral response of CdZnTe-based X- and gamma-ray detectors. <i>Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment</i> , 2020, 960, 163663.	0.7	13

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55	Electroless gold contact deposition on CdZnTe detectors by scanning pipette technique. Journal of Instrumentation, 2012, 7, P08022-P08022.	0.5	12
56	Two-step thermal process in tellurium vapor for tellurium inclusion annealing in high resistivity CdZnTe crystals. Journal of Crystal Growth, 2015, 415, 15-19.	0.7	12
57	Growth and characterization of $\hat{I}^2$ -Ca <sub>2</sub> O <sub>3</sub> nanowires obtained on not-catalyzed and Au/Pt catalyzed substrates. Journal of Crystal Growth, 2017, 457, 255-261.	0.7	12
58	Facile synthesis of hierarchical CuO nanostructures with enhanced photocatalytic activity. Crystal Research and Technology, 2014, 49, 594-598.	0.6	11
59	Growth and structural characterization of Sb <sub>2</sub> Se <sub>3</sub> solar cells with vertical Sb <sub>4</sub> Se <sub>6</sub> ribbon alignment by RF magnetron sputtering. Journal Physics D: Applied Physics, 2021, 54, 385502.	1.3	11
60	Magnetocaloric properties at the austenitic Curie transition in Cu and Fe substituted Ni-Mn-In Heusler compounds. Journal of Alloys and Compounds, 2022, 899, 163249.	2.8	11
61	Unmanned aerial vehicle equipped with spectroscopic CdZnTe detector for detection and identification of radiological and nuclear material. , 2015, , .		10
62	Control of the interface shape in vertical Bridgman grown CdZnTe crystals for X-ray detector applications. CrystEngComm, 2012, 14, 5992.	1.3	9
63	Pd/PdO functionalization of SnO <sub>2</sub> nanowires and ZnO nanotetrapods. Crystal Research and Technology, 2011, 46, 847-851.	0.6	8
64	Study of the anomalous zinc distribution in vertical Bridgman grown CdZnTe crystals. CrystEngComm, 2013, 15, 2227-2231.	1.3	8
65	Turning carbon fiber into a stress-sensitive composite material. Journal of Materials Chemistry A, 2016, 4, 10486-10492.	5.2	8
66	An affordable method to produce CuInS <sub>2</sub> mecano-targets™ for film deposition. Semiconductor Science and Technology, 2020, 35, 045026.	1.0	8
67	Preparation and characterization of powders and crystals of Vn-xTi <sub>x</sub> O <sub>2n-1</sub> Magneli oxides. Crystal Research and Technology, 2005, 40, 1067-1071.	0.6	7
68	Modification of the Luminescence Properties of CZT Crystals Around Tellurium Inclusions. IEEE Transactions on Nuclear Science, 2012, 59, 1526-1530.	1.2	7
69	Oriented orthorhombic Lead Oxide film grown by vapour phase deposition for X-ray detector applications. Crystal Research and Technology, 2013, 48, 245-250.	0.6	7
70	Haptic Teleoperation of UAV Equipped with Gamma-Ray Spectrometer for Detection and Identification of Radio-Active Materials in Industrial Plants. , 2019, , 197-214.		7
71	Directionally Selective Sensitization of ZnO Nanorods by TiOPc: A Novel Approach to Functionalized Nanosystems. Journal of Physical Chemistry C, 2012, 116, 8223-8229.	1.5	6
72	Fabrication of ZnO-nanowire-coated thin-foil targets for ultra-high intensity laser interaction experiments. Matter and Radiation at Extremes, 2021, 6, .	1.5	6

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73	Numerical and experimental investigation of CdZnTe growth by the boron oxide encapsulated vertical Bridgman method. International Journal of Heat and Mass Transfer, 2021, 176, 121490.	2.5	6
74	Characterization of CZT crystals grown by the boron oxide encapsulated vertical Bridgman technique for the preparation of X-ray imaging detectors. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2011, 633, S92-S94.	0.7	5
75	Controllable vapor phase growth of vertically aligned ZnO nanorods on TCO/Glass substrates. Crystal Research and Technology, 2014, 49, 558-563.	0.6	5
76	Transforming diatomaceous earth into sensing devices by surface modification with gold nanoparticles. Micro and Nano Engineering, 2019, 2, 29-34.	1.4	5
77	Sub-Micropillar Spacing Modulates the Spatial Arrangement of Mouse MC3T3-E1 Osteoblastic Cells. Nanomaterials, 2019, 9, 1701.	1.9	5
78	Charge-separation enhancement in inverted polymer solar cells by molecular-level triple heterojunction: NiO-np:P3HT:PCBM. Nanotechnology, 2017, 28, 035403.	1.3	4
79	High energy resolution pixel detectors based on boron oxide vertical Bridgman grown CdZnTe crystals. , 2014, , .		3
80	On the Role of Oxygen Vacancies in the Determination of the Gas-Sensing Properties of Tin-Oxide Nanowires. Materials Research Society Symposia Proceedings, 2006, 915, 1.	0.1	2
81	Deposition of CdTe films under microgravity: Foton M3 mission. Crystal Research and Technology, 2009, 44, 1059-1066.	0.6	2
82	Tuning morphology and magnetism in epitaxial L10-FePt films. EPJ Web of Conferences, 2013, 40, 08001.	0.1	2
83	Electroless gold patterning of CdZnTe crystals for radiation detection by scanning pipette technique. Crystal Research and Technology, 2014, 49, 535-539.	0.6	2
84	InZnO nanorods obtained via zinc vapour phase deposition on liquid indium seeded substrates. CrystEngComm, 2014, 16, 1696.	1.3	2
85	Mechanically stable metal layers for ohmic and blocking contacts on CdZnTe detectors by electroless deposition. , 2015, , .		2
86	Charge carrier transport mechanisms in CdZnTe detectors grown by the vertical Bridgman technique. , 2015, , .		2
87	Fabrication of Small-Pixel CdZnTe Sensors and Characterization with X-rays. Sensors, 2021, 21, 2932.	2.1	2
88	Single-Source Thermal Ablation of halide perovskites, limitations and opportunities: The lesson of MAPbBr3. Journal of Alloys and Compounds, 2021, 875, 159954.	2.8	2
89	Mechanosynthesis of multiferroic hybrid organic-inorganic [NH4][M(HCOO)3] MA=ACo2+,Mn2+,Zn2+,Ni2+, Cu2+ formate-based frameworks. Journal of Alloys and Compounds, 2022, 899, 163288.	2.8	2
90	Overcoming the planar contact geometry limitation for the measurement of transport properties and electric field distribution in X- and gamma ray detectors. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2018, 908, 411-415.	0.7	1

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91	Evaluating the plasmon-exciton interaction in ZnO tetrapods coupled with gold nanostructures by nanoscale cathodoluminescence. Nano Express, 2021, 2, 014004.	1.2	1
92	Preparation and Characterization of Powders and Crystals of Vn-xTixO2n-1 Magneli Oxides.. ChemInform, 2006, 37, no.	0.1	0
93	Visible-Range Luminescence Study in Indium Oxide Nanowires. Materials Research Society Symposia Proceedings, 2007, 1010, 1.	0.1	0
94	Pulsed electron deposition (PED) of single buffer layer for "low-cost"™ YBCO coated conductors. Journal of Physics: Conference Series, 2008, 97, 012197.	0.3	0
95	The Challenge for Large-scale Vapor-phase Growths of Not-catalyzed ZnO Nanostructures: Purity vs. Yield. Materials Research Society Symposia Proceedings, 2009, 1174, 43.	0.1	0
96	Luminescence properties of CZT crystals in the presence of tellurium inclusions. , 2011, , .		0
97	Characterization of the physical and chemical properties of engineered nanomaterials. , 2019, , 31-57.		0
98	GROWTH MECHANISMS OF TIN OXIDE AND ZINC OXIDE NANOSTRUCTURES FROM VAPOUR PHASE. , 2009, , .		0
99	Functionalized ZnO nanostructures for gas sensing and photovoltaic applications. Acta Crystallographica Section A: Foundations and Advances, 2011, 67, C536-C537.	0.3	0
100	Crystal growth of nanostructured zinc oxide nanorods from the seed layer. Materials Science-Poland, 2018, 36, 477-482.	0.4	0