

# Vincenzo Guidi

## List of Publications by Year in descending order

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Version: 2024-02-01

91  
papers

1,450  
citations

304743

22  
h-index

377865

34  
g-index

93  
all docs

93  
docs citations

93  
times ranked

960  
citing authors

#	ARTICLE	IF	CITATIONS
1	Investigation on Sensing Performance of Highly Doped Sb/SnO <sub>2</sub> . <i>Sensors</i> , 2022, 22, 1233.	3.8	12
2	Design of a Metal-Oxide Solid Solution for Sub-ppm H <sub>2</sub> Detection. <i>ACS Sensors</i> , 2022, 7, 573-583.	7.8	13
3	Elucidating the Ambient Stability and Gas Sensing Mechanism of Nickel-Decorated Phosphorene for NO <sub>2</sub> Detection: A First-Principles Study. <i>ACS Omega</i> , 2022, 7, 9808-9817.	3.5	8
4	First-Principles Study of Electronic Conductivity, Structural and Electronic Properties of Oxygen-Vacancy-Defected SnO <sub>2</sub> . <i>Journal of Nanoscience and Nanotechnology</i> , 2021, 21, 2633-2640.	0.9	3
5	Design and validation of a novel operando spectroscopy reaction chamber for chemoresistive gas sensors. <i>Sensors and Actuators B: Chemical</i> , 2021, 341, 130012.	7.8	10
6	Air Stable Nickel-Decorated Black Phosphorus and Its Room-Temperature Chemiresistive Gas Sensor Capabilities. <i>ACS Applied Materials &amp; Interfaces</i> , 2021, 13, 44711-44722.	8.0	26
7	Nanostructured SmFeO <sub>3</sub> Gas Sensors: Investigation of the Gas Sensing Performance Reproducibility for Colorectal Cancer Screening. <i>Sensors</i> , 2020, 20, 5910.	3.8	24
8	X-ray characterization of self-standing bent Si crystal plates for Large Hadron Collider beam extraction. <i>Journal of Applied Crystallography</i> , 2020, 53, 486-493.	4.5	5
9	Nanostructured Chemoresistive Sensors for Oncological Screening and Tumor Markers Tracking: Single Sensor Approach Applications on Human Blood and Cell Samples. <i>Sensors</i> , 2020, 20, 1411.	3.8	12
10	Strengthening of Wood-like Materials via Densification and Nanoparticle Intercalation. <i>Nanomaterials</i> , 2020, 10, 478.	4.1	17
11	Influence of Oxygen Vacancies in Gas Sensors Based on Tin Dioxide Nanostructure: A First Principles Study. <i>Proceedings (mdpi)</i> , 2019, 14, .	0.2	0
12	Chemoresistive Nanostructured Sensors for Tumor Pre-Screening. <i>Proceedings (mdpi)</i> , 2019, 14, 29.	0.2	3
13	Development of MEMS MOS gas sensors with CMOS compatible PECVD inter-metal passivation. <i>Sensors and Actuators B: Chemical</i> , 2019, 292, 225-232.	7.8	31
14	Silicon crystalline undulator prototypes: Manufacturing and x-ray characterization. <i>Physical Review Accelerators and Beams</i> , 2019, 22, .	1.6	4
15	High-energy $e^{\sim}/e^+$ spectrometer via coherent interaction in a bent crystal. <i>Astroparticle Physics</i> , 2018, 97, 27-32.	4.3	2
16	Glyphosate Detection: An Innovative Approach by Using Chemoresistive Gas Sensors. <i>Proceedings (mdpi)</i> , 2018, 2, 910.	0.2	1
17	A New Method to Prepare Few-Layers of Nanoclusters Decorated Graphene: Nb <sub>2</sub> O <sub>5</sub> /Graphene and Its Gas Sensing Properties. <i>Proceedings (mdpi)</i> , 2018, 2, .	0.2	1
18	Thick self-standing bent crystals as optical elements for a Laue lens for applications in astrophysics. <i>Experimental Astronomy</i> , 2018, 46, 309-321.	3.7	4

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19	Neoplasms and metastasis detection in human blood exhalations with a device composed by nanostructured sensors. <i>Sensors and Actuators B: Chemical</i> , 2018, 271, 203-214.	7.8	8
20	Modelling Soil Water Content in a Tomato Field: Proximal Gamma Ray Spectroscopy and Soilâ€‘Crop System Models. <i>Agriculture (Switzerland)</i> , 2018, 8, 60.	3.1	28
21	Crystalline Microporous Organosilicates with Reversed Functionalities of Organic and Inorganic Components for Room-Temperature Gas Sensing. <i>ACS Applied Materials &amp; Interfaces</i> , 2017, 9, 24812-24820.	8.0	9
22	Homogeneous self-standing curved monocrystals, obtained using sandblasting, to be used as manipulators of hard X-rays and charged particle beams. <i>Journal of Applied Crystallography</i> , 2017, 50, 145-151.	4.5	11
23	Silicon Carbide: A Gas Sensing Material for Selective Detection of SO <sub>2</sub> . <i>Proceedings (mdpi)</i> , 2017, 1, .	0.2	0
24	On the Optimization of a MEMS Device for Chemoresistive Gas Sensors. <i>Proceedings (mdpi)</i> , 2017, 1, 746.	0.2	0
25	Sustainable Water Management: Sensors for Precision Farming. <i>Proceedings (mdpi)</i> , 2017, 1, 780.	0.2	0
26	Room Temperature Chemoresistive Gas Sensor Based on Organic-Functionalized Graphene Oxide. <i>Proceedings (mdpi)</i> , 2017, 1, 805.	0.2	0
27	Eni Carbon Silicates: Innovative Hybrid Materials for Room-Temperature Gas Sensing. <i>Proceedings (mdpi)</i> , 2017, 1, 322.	0.2	0
28	Use of Gas Sensors and FOBT for the Early Detection of Colorectal Cancer. <i>Proceedings (mdpi)</i> , 2017, 1, .	0.2	6
29	Eni Carbon Silicates: Innovative Hybrid Materials for Room-Temperature Gas Sensing. <i>Proceedings (mdpi)</i> , 2017, 1, 1372.	0.2	0
30	Eni Carbon Silicates: Innovative Hybrid Materials for Room-Temperature Gas Sensing. <i>Proceedings (mdpi)</i> , 2017, 1, 1372.	0.2	0
31	Metal Sulfides as Sensing Materials for Chemoresistive Gas Sensors. <i>Sensors</i> , 2016, 16, 296.	3.8	76
32	Laue lens to focus an X-ray beam for radiation therapy. <i>Journal of Applied Crystallography</i> , 2016, 49, 468-478.	4.5	5
33	Origin of quasi-mosaic effect for symmetric skew planes in a silicon or germanium plate. <i>Journal of Applied Crystallography</i> , 2016, 49, 1810-1813.	4.5	1
34	The 'quasi-mosaic' effect in crystals and its applications in modern physics. <i>Journal of Applied Crystallography</i> , 2015, 48, 977-989.	4.5	24
35	Ion implantation for manufacturing bent and periodically bent crystals. <i>Applied Physics Letters</i> , 2015, 107, .	3.3	10
36	Channeling efficiency dependence on bending radius and thermal vibration amplitude of the model for the channeling of high-energy particles in straight and bent crystals implemented in Geant4. <i>Nuclear Instruments &amp; Methods in Physics Research B</i> , 2015, 355, 387-389.	1.4	4

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37	Manufacturing of advanced bent crystals for Laue Optics for Gamma ObservationS (LOGOS). Nuclear Instruments & Methods in Physics Research B, 2015, 355, 297-300.	1.4	6
38	Simulation of orientational effects in crystals with structural defects through DYNECHARM++. Nuclear Instruments & Methods in Physics Research B, 2015, 355, 365-368.	1.4	4
39	High-efficiency diffraction and focusing of X-rays through asymmetric bent crystalline planes. Journal of Applied Crystallography, 2015, 48, 297-300.	4.5	6
40	Design study of a Laue lens for nuclear medicine. Journal of Applied Crystallography, 2015, 48, 125-137.	4.5	13
41	AniCryDe: calculation of elastic properties in silicon and germanium crystals. Journal of Applied Crystallography, 2015, 48, 943-949.	4.5	14
42	RADCHARM++: A C++ routine to compute the electromagnetic radiation generated by relativistic charged particles in crystals and complex structures. Nuclear Instruments & Methods in Physics Research B, 2015, 355, 44-48.	1.4	18
43	Study and characterization of bent crystals for Laue lenses. Experimental Astronomy, 2014, 38, 401-416.	3.7	13
44	Stack of quasi-mosaic thin lamellae as a diffracting element for Laue lenses. Experimental Astronomy, 2014, 38, 25-40.	3.7	4
45	Quasi-mosaicity of (311) planes in silicon and its use in a Laue lens with high-focusing power. Experimental Astronomy, 2014, 38, 417-431.	3.7	8
46	Chemoresistive Gas Sensors for the Detection of Colorectal Cancer Biomarkers. Sensors, 2014, 14, 18982-18992.	3.8	33
47	High-efficiency focusing of hard X-rays exploiting the quasi-mosaic effect in a bent germanium crystal. Journal of Applied Crystallography, 2014, 47, 799-802.	4.5	11
48	Resonant photoactivation of cadmium sulfide and its effect on the surface chemical activity. Applied Physics Letters, 2014, 104, 222102.	3.3	20
49	Highly reproducible quasi-mosaic crystals as optical components for a Laue lens. Experimental Astronomy, 2014, 37, 1-10.	3.7	13
50	Genetic algorithm to design Laue lenses with optimal performance for focusing hard X- and $\gamma$ -rays. Astronomy and Astrophysics, 2014, 570, A17.	5.1	6
51	Photo-activation of Cadmium Sulfide Films for Gas Sensing. Procedia Engineering, 2014, 87, 140-143.	1.2	10
52	High diffraction efficiency with hard X-rays through a thick silicon crystal bent by carbon fiber deposition. Journal of Applied Crystallography, 2014, 47, 1762-1764.	4.5	15
53	Experimental analysis and modeling of self-standing curved crystals for focusing of X-rays. Meccanica, 2013, 48, 1875-1882.	2.0	22
54	A joint thermal-electrical analysis of void formation effects on concentrator silicon solar cells solder layer. Solar Energy Materials and Solar Cells, 2013, 111, 133-140.	6.2	8

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55	Self-standing quasi-mosaic crystals for focusing hard X-rays. Review of Scientific Instruments, 2013, 84, 053110.	1.3	19
56	Curved crystals for high-resolution focusing of X and gamma rays through a Laue lens. Nuclear Instruments & Methods in Physics Research B, 2013, 309, 249-253.	1.4	15
57	DYNECHARM++: a toolkit to simulate coherent interactions of high-energy charged particles in complex structures. Nuclear Instruments & Methods in Physics Research B, 2013, 309, 124-129.	1.4	36
58	Calculation of diffraction efficiency for curved crystals with arbitrary curvature radius. Journal of Applied Crystallography, 2013, 46, 415-420.	4.5	7
59	Ordered stacking of crystals with adjustable curvatures for hard X- and $\hat{I}^3$ -ray broadband focusing. Journal of Applied Crystallography, 2013, 46, 953-959.	4.5	12
60	Fabrication of quasi-mosaic Ge crystals for the LAUE project. Proceedings of SPIE, 2013, , .	0.8	5
61	Quasi-mosaicity as a powerful tool to investigate coherent effects. Proceedings of SPIE, 2013, , .	0.8	0
62	Proposal for a Laue lens relying on hybrid quasi-mosaic curved crystals. Astronomy and Astrophysics, 2013, 560, A58.	5.1	15
63	Radiation generated by single and multiple volume reflection of ultrarelativistic electrons and positrons in bent crystals. Physical Review A, 2012, 86, .	2.5	38
64	Publisher's Note: Radiation generated by single and multiple volume reflection of ultrarelativistic electrons and positrons in bent crystals [Phys. Rev. A86, 042903 (2012)]. Physical Review A, 2012, 86, .	2.5	0
65	Quasi-mosaicity as a tool for focusing hard x-rays. Proceedings of SPIE, 2012, , .	0.8	4
66	Bent crystals as high-reflectivity components for a Laue lens: basic concepts and experimental techniques. , 2012, , .		0
67	Stack of curved crystals as optical component for hard x- and gamma-ray focusing through a Laue lens. Proceedings of SPIE, 2012, , .	0.8	2
68	Self-standing bent silicon crystals for very high efficiency Laue lens. Experimental Astronomy, 2011, 31, 45-58.	3.7	38
69	Proposal for a Laue lens with quasi-mosaic crystalline tiles. Journal of Applied Crystallography, 2011, 44, 1255-1258.	4.5	25
70	A study of heat distribution and dissipation in a micromachined chemoresistive gas sensor. Sensors and Actuators B: Chemical, 2011, 153, 409-414.	7.8	10
71	High diffraction efficiency at hard X-ray energy in a silicon crystal bent by indentation. Journal of Applied Crystallography, 2010, 43, 1519-1521.	4.5	29
72	On the observation of multiple volume reflection from different planes inside one bent crystal. Journal of Applied Physics, 2010, 107, .	2.5	14

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73	Double volume reflection of a proton beam by a sequence of two bent crystals. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 2008, 658, 109-111.	4.1	25
74	High-Efficiency Deflection of High-Energy Protons through Axial Channeling in a Bent Crystal. Physical Review Letters, 2008, 101, 164801.	7.8	45
75	Deflection of $400\text{ GeV}$ beam with bent silicon crystals at the CERN Super Proton Synchrotron. Physical Review Special Topics: Accelerators and Beams, 2008, 11, .	1.8	50
76	Apparatus to study crystal channeling and volume reflection phenomena at the SPS H8 beamline. Review of Scientific Instruments, 2008, 79, 023303.	1.3	23
77	High-Efficiency Volume Reflection of an Ultrarelativistic Proton Beam with a Bent Silicon Crystal. Physical Review Letters, 2007, 98, 154801.	7.8	123
78	Explosive evaporation of Rb or K clusters by low-power laser radiation in the presence of excited atoms. Proceedings of SPIE, 2007, , .	0.8	0
79	<title>Experimental apparatus to study crystal channeling in an external SPS beamline</title>. , 2007, , .		0
80	Nanostructured (Sn,Ti, Nb)O <sub>2</sub> Solid Solution for Hydrogen Sensing. Materials Research Society Symposia Proceedings, 2006, 915, 1.	0.1	10
81	Structure and morphology of surface of silicon crystals to be applied for channeling at relativistic energies. Nuclear Instruments & Methods in Physics Research B, 2006, 249, 903-906.	1.4	1
82	Investigation of the humidity effects on SnO <sub>2</sub> -based sensors in CO detection. Materials Research Society Symposia Proceedings, 2006, 915, 1.	0.1	6
83	Vanadium and tantalum-doped titanium oxide (TiTaV): a novel material for gas sensing. Sensors and Actuators B: Chemical, 2005, 108, 89-96.	7.8	24
84	Photo-Induced Unpinning of Fermi Level in WO <sub>3</sub> . Sensors, 2005, 5, 594-603.	3.8	14
85	Unpinning of Fermi level in nanocrystalline semiconductors. Applied Physics Letters, 2004, 84, 4158-4160.	3.3	46
86	Gas sensors based on semiconductor oxides: basic aspects onto materials and working principles. Materials Research Society Symposia Proceedings, 2004, 828, 173.	0.1	5
87	Thick-film gas sensors based on vanadium-titanium oxide powders prepared by sol-gel synthesis. Journal of the European Ceramic Society, 2004, 24, 1409-1413.	5.7	24
88	Polarized electron sources. , 2000, 127, 455-462.		3
89	Preparation and Characterization of Nanostructured Titania Thick Films. Advanced Materials, 1999, 11, 943-946.	21.0	80
90	Microstructural characterization of a titanium-tungsten oxide gas sensor. Journal of Materials Research, 1997, 12, 793-798.	2.6	48

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91	A novel method for the preparation of nanosized tio2 thin films. Advanced Materials, 1996, 8, 334-337.	21.0	70