Roberto Cristiano

List of Publications by Year
in descending order

145 papers	1,877 citations	279798 23 h-index	315739 38 g-index
148 all docs	148 docs citations	148 times ranked	1229 citing authors

#	Article	IF	Citations
1	European roadmap on superconductive electronics â€“ status and perspectives. Physica C: Superconductivity and Its Applications, 2010, 470, 2079-2126.	1.2	131
2	A cascade switching superconducting single photon detector. Applied Physics Letters, 2007, 91, .	3.3	108
3	Reset dynamics and latching in niobium superconducting nanowire single-photon detectors. Journal of Applied Physics, 2010, 108, 084507.	2.5	88
4	Effect of dissipation on thermal activation in an underdamped Josephson junction: First evidence of a transition between different damping regimes. Physical Review Letters, 1988, 60, 844-847.	7.8	58
5	Characterization of parallel superconducting nanowire single photon detectors. Superconductor Science and Technology, 2009, 22, 055006.	3.5	47
6	1 mm ultrafast superconducting stripline molecule detector. Applied Physics Letters, 2009, 95, .	3.3	47
7	Supercurrent decay in underdamped Josephson junctions: Nonstationary case. Journal of Applied Physics, 1985, 58, 3822-3826.	2.5	43
8	Investigation of lowâ€temperatureIâ€Vcurves of highâ€quality Nb/Alâ€AlOx/Nb Josephson junctions. Journal of Applied Physics, 1992, 71, 1888-1892.	2.5	35
9	Controlling flux flow dissipation by changing flux pinning in superconducting films. Applied Physics Letters, 2012, 100, .	3.3	35
10	A New Fabrication Process of Superconducting Nb Tunnel Junctions with Ultralow Leakage Current for X-Ray Detection. Japanese Journal of Applied Physics, 1993, 32, 4535-4537.	1.5	33
11	Subnanosecond time response of large-area superconducting stripline detectors for keV molecular ions. Applied Physics Letters, 2009, 94, .	3.3	33
12	High-temperature superconducting nanowires for photon detection. Physica C: Superconductivity and Its Applications, 2015, 509, 16-21.	1.2	30
13	Strong critical current density enhancement in NiCu/NbN superconducting nanostripes for optical detection. Applied Physics Letters, 2010, 97, 092504.	3.3	29
14	Highly homogeneous YBCO/LSMO nanowires for photoresponse experiments. Superconductor Science and Technology, 2014, 27, 044027.	3.5	29
15	The characteristic electronâ€“phonon coupling time of unconventional superconductors and implications for optical detectors. Superconductor Science and Technology, 2005, 18, 1244-1251.	3.5	28
16	Control of bulk superconductivity in a BCS superconductor by surface charge doping via electrochemical gating. Physical Review B, 2017, 95, .	3.2	28
17	Effects of level quantization on the supercurrent decay in Josephson junctions: The nonstationary case. Physical Review B, 1990, 41, 7341-7344.	3.2	26
18	Switching dynamics of Nb/AlOx/Nb Josephson junctions: Measurements for an experiment of macroscopic quantum coherence. Journal of Applied Physics, 1996, 80, 2922-2928.	2.5	26

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19	Fabrication and test of Superconducting Single Photon Detectors. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2006, 559, 564-566.	1.6	26
20	Superconductor to resistive state switching by multiple fluctuation events in NbTiN nanostrips. Scientific Reports, 2019, 9, 8053.	3.3	26
21	Thicker, more efficient superconducting strip-line detectors for high throughput macromolecules analysis. Applied Physics Letters, 2011, 98, .	3.3	24
22	Observation of dark pulses in 10 nm thick YBCO nanostrips presenting hysteretic current voltage characteristics. Superconductor Science and Technology, 2017, 30, 12LT02.	3.5	24
23	Thermal fluctuations in superconductor/ferromagnet nanostripes. Physical Review B, 2015, 92, .	3.2	22
24	Timing jitter of cascade switch superconducting nanowire single photon detectors. Applied Physics Letters, 2009, 95, 132503.	3.3	20
25	Investigation of subgap structures in high-quality Nb/AlOx/Nb tunnel junctions. Physical Review B, 1994, 49, 429-440.	3.2	19
26	Magnetic properties of annular Josephson junctions for radiation detection: Experimental results. Applied Physics Letters, 1999, 74, 3389-3391.	3.3	19
27	Maximum count rate of large area superconducting single photon detectors. Journal of Modern Optics, 2009, 56, 390-394.	1.3	19
28	Quasiparticle diffusion, edge losses, and back-tunneling in superconducting tunnel junctions under x-ray irradiation. Journal of Applied Physics, 1999, 86, 4580-4587.	2.5	18
29	Superconducting Transition Temperature Modulation in NbN via EDL Gating. Journal of Superconductivity and Novel Magnetism, 2016, 29, 587-591.	1.8	18
30	Nbâ€based Josephson junction devices for nuclear radiation detection: Design and preliminary experimental results. Journal of Applied Physics, 1994, 75, 5210-5217.	2.5	17
31	Annular Josephson junctions as superconductive nuclear particle detectors. Applied Physics Letters, 1997, 70, 1320-1322.	3.3	16
32	Effect of intense proton irradiation on properties of Josephson devices. IEEE Transactions on Applied Superconductivity, 1997, 7, 2917-2920.	1.7	15
33	Fiske steps in annular Josephson junctions with trapped flux quanta. Physical Review B, 1998, 58, 11685-11691.	3.2	15
34	Feasibility Investigation of NbN Nanowires as Detector in Time-of-Flight Mass Spectrometers forÂMacromolecules of Interest in Biology (Proteins). Journal of Low Temperature Physics, 2008, 151, 771-776.	1.4	15
35	Superconducting nano-strip particle detectors. Superconductor Science and Technology, 2015, 28, 124004.	3.5	15
36	Decay of the running state in underdamped Josephson junctions. Journal of Applied Physics, 1986, 59, 1401-1403.	2.5	14

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37	A 2 Ã— 2 mm²superconducting strip-line detector for high-performance time-of-flight mass spectrometry. Superconductor Science and Technology, 2012, 25, 115004.	3.5	14
38	Current distribution in a parallel configuration superconducting strip-line detector. Applied Physics Letters, 2013, 103, .	3.3	14
39	NanoSQUIDs based on niobium nitride films. Superconductor Science and Technology, 2017, 30, 024009.	3.5	14
40	The effective dissipation in Nb/AlOx/Nb Josephson tunnel junctions by return current measurements. Journal of Applied Physics, 1997, 81, 7418-7426.	2.5	12
41	Lidar techniques for a SNSPD-based measurement. Journal of Physics: Conference Series, 2019, 1182, 012014.	0.4	12
42	Traversal Time as Deduced from Decay Time Measurements in Josephson Junctions. Physica Scripta, 1998, 58, 538-542.	2.5	11
43	Fiske resonances in annular Josephson junctions. Physical Review B, 2000, 62, 8683-8686.	3.2	11
44	New Fluxon Resonant Mechanism in Annular Josephson Tunnel Structures. Physical Review Letters, 2004, 93, 187001.	7.8	11
45	Dynamics of nonequilibrium quasiparticles in a double superconducting tunnel junction detector. Superconductor Science and Technology, 2005, 18, 953-960.	3.5	11
46	Time-resolved observation of fast hotspot dynamics in superconducting nanowires. Physical Review B, 2010, 81, .	3.2	11
47	The Role of Multiple Fluctuation Events in NbN and NbTiN Superconducting Nanostrip Single-Photon Detectors. Journal of Low Temperature Physics, 2020, 199, 6-11.	1.4	11
48	Fraunhofer critical-current diffraction pattern in annular Josephson junctions with injected current. Physical Review B, 2002, 65, .	3.2	10
49	Kinetic Inductance Detectors for Mass Spectroscopy. IEEE Transactions on Applied Superconductivity, 2005, 15, 940-943.	1.7	10
50	Nano-Strip Three-Terminal Superconducting Device for Cryogenic Detector Readout. IEEE Transactions on Applied Superconductivity, 2011, 21, 717-720.	1.7	10
51	Non-linear Flux Flow Resistance of Type-II Superconducting Films. Journal of Superconductivity and Novel Magnetism, 2011, 24, 81-87.	1.8	10
52	Aspects of thermal activation theory and applications to the Josephson effect. Journal of Applied Physics, 1986, 60, 3243-3246.	2.5	9
53	On the magnetic field dependence of the critical current in small irregular polygonal Josephson junctions. Journal of Applied Physics, 1996, 80, 3401-3407.	2.5	9
54	Experimental estimation of the hot spot size in Nb-based Josephson tunnel junctions using Abrikosov vortices. Journal of Applied Physics, 1997, 82, 5024-5029.	2.5	9

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55	Detection of single x-ray photons by an annular superconducting tunnel junction. Applied Physics Letters, 2001, 79, 2103-2105.	3.3	9
56	Investigations on particular Josephson devices shedding light on more fundamental issues. Physica C: Superconductivity and Its Applications, 2002, 367, 241-248.	1.2	9
57	Large Signal Amplitude and Bias Range of Cascade Switch Superconducting Nanowire Single Photon Detectors. IEEE Transactions on Applied Superconductivity, 2009, 19, 323-326.	1.7	9
58	Effect of capacitance onIâ€Vcharacteristics of overdamped Josephson junctions: Classical and quantum limits. Journal of Applied Physics, 1984, 56, 1473-1476.	2.5	8
59	Josephson tunnel junctions as fast nuclear particle position detectors. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 1996, 370, 110-111.	1.6	8
60	Direct measurements of relaxation time scales in Josephson junctions. Solid State Communications, 1996, 97, 439-444.	1.9	8
61	Traversal Time in Josephson Junctions. Journal of Superconductivity and Novel Magnetism, 1999, 12, 829-833.	0.5	8
62	Superconductive Three-Terminal Amplifier/Discriminator. IEEE Transactions on Applied Superconductivity, 2009, 19, 367-370.	1.7	8
63	Experimental evidence of photoinduced vortex crossing in current carrying superconducting strips. Physical Review B, 2015, 92, .	3.2	8
64	Demonstration of Single Photon Detection in Amorphous Molybdenum Silicide / Aluminium Superconducting Nanostrip. IEEE Instrumentation and Measurement Magazine, 2021, 24, 69-74.	1.6	8
65	Observation of subgap structures in high-quality Nb/Al-AlOx/Nb Josephson tunnel junctions. Journal of Superconductivity and Novel Magnetism, 1992, 5, 451-455.	0.5	7
66	Radiation Hardness of Josephson Devices. Japanese Journal of Applied Physics, 1998, 37, 40.	1.5	7
67	Quasiparticle diffusion and edge losses in superconducting tunnel junction detectors with two active electrodes. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2000, 444, 15-18.	1.6	7
68	Large area single photon detectors based on parallel configuration NbN nanowires. Journal of Vacuum Science and Technology B:Nanotechnology and Microelectronics, 2012, 30, .	1.2	7
69	Influence of a NbN overlayer on Nb/Alâ€“AlOx/Nb high quality Josephson tunnel junctions for xâ€ray detection. Applied Physics Letters, 1995, 67, 3340-3342.	3.3	6
70	Fast Josephson cryodetector for time of flight mass spectrometry. Physica C: Superconductivity and Its Applications, 2002, 372-376, 423-426.	1.2	6
71	Josephson device for simultaneous time and energy detection. Applied Physics Letters, 2003, 82, 2109-2111.	3.3	6
72	X-ray energy spectrum measurements by an annular superconducting tunnel junction with trapped magnetic flux quanta. Applied Physics Letters, 2004, 84, 5464-5466.	3.3	6

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73	Characterization of superconducting pulse discriminators based on parallel NbN nanostriplines. Superconductor Science and Technology, 2011, 24, 035018.	3.5	6
74	Proposal for a Nanoscale Superconductive Memory. IEEE Transactions on Applied Superconductivity, 2017, 27, 1-4.	1.7	6
75	Parallel superconducting strip-line detectors: reset behaviour in the single-strip switch regime. Superconductor Science and Technology, 2014, 27, 044029.	3.5	6
76	X-ray detection by Nb STJs above 1.4 K. Journal of Low Temperature Physics, 1993, 93, 691-696.	1.4	5
77	Progress in fabrication of high quality tantalum film absorber for STJ radiation detector. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2004, 520, 243-245.	1.6	5
78	Compositional Analysis by a Superconductor-Based Energy Dispersive Spectrometer. IEEE Transactions on Applied Superconductivity, 2007, 17, 625-628.	1.7	5
79	Superconducting Molecule Detectors Overcoming Fundamental Limits of Conventional Mass Spectrometry. Journal of Low Temperature Physics, 2012, 167, 943-948.	1.4	5
80	Ultrathin superconducting NbRe microstrips with hysteretic voltage-current characteristic. Low Temperature Physics, 2020, 46, 379-382.	0.6	5
81	Large Area SNSPD for Lidar Measurements in the Infrared. IEEE Transactions on Applied Superconductivity, 2022, 32, 1-4.	1.7	5
82	Tunneling characteristics of Pb-CdS-Pb light-sensitive Josephson junctions. IEEE Transactions on Magnetics, 1983, 19, 983-986.	2.1	4
83	Decay of the running state in Josephson junctions: Preliminary experimental results. Physics Letters, Section A: General, Atomic and Solid State Physics, 1988, 133, 347-352.	2.1	4
84	Two-particle tunneling current in Josephson junctions. Journal of Low Temperature Physics, 1995, 99, 81-105.	1.4	4
85	The role of the geometry in superconducting tunnel junction detectors. Superconductor Science and Technology, 2000, 13, 542-545.	3.5	4
86	Reverse switching current distributions in underdamped Josephson junctions. IEEE Transactions on Magnetics, 1987, 23, 771-774.	2.1	3
87	BCS quasi-particle tunnelling current in Josephson tunnel junctions. Nuovo Cimento Della Societa Italiana Di Fisica D - Condensed Matter, Atomic, Molecular and Chemical Physics, Biophysics, 1992, 14, 395-410.	0.4	3
88	Nonequilibrium superconducting detectors. Superconductor Science and Technology, 2006, 19, S152-S159.	3.5	3
89	Superconducting nano-striplines as quantum detectors. Journal of Nanoparticle Research, 2011, 13, 6121-6131.	1.9	3
90	Parallel Superconducting Strip-Line Detectors for Time-of-flight Mass Spectrometry. Journal of Low Temperature Physics, 2012, 167, 979-984.	1.4	3

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91	Integrated Joule switches for the control of current dynamics in parallel superconducting strips. Superconductor Science and Technology, 2018, 31, 06LT01.	3.5	3
92	Effect of Quantum Fluctuations onIâ^'VCurves of Overdamped Josephson Junctions. Physical Review Letters, 1985, 54, 157-157.	7.8	2
93	Aspects of dissipation effects in experiments on macroscopic quantum tunnelling in Josephson junctions. Nuovo Cimento Della Societa Italiana Di Fisica D - Condensed Matter, Atomic, Molecular and Chemical Physics, Biophysics, 1989, 11, 187-199.	0.4	2
94	Experimental results on the metastability of the resistive state in Josephson junctions. IEEE Transactions on Magnetics, 1989, 25, 1416-1419.	2.1	2
95	Aluminum Superconducting Tunnel Junction as X-ray detector: Technological aspects and phonon decoupling from the substrate. , 2002, , .		2
96	Dynamical states in annular Josephson junctions: Amplitude dependence of zero field steps on the magnetic field. Physica C: Superconductivity and Its Applications, 2002, 372-376, 42-45.	1.2	2
97	Annular superconducting tunnel junction with injected current as a new configuration of radiation detector. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2004, 520, 240-242.	1.6	2
98	Dual-detector for simultaneous time and energy measurements with superconductive detectors. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2004, 520, 41-43.	1.6	2
99	Operation of superconducting nano-stripline detector (SSLD) mounted on cryogen-free cryostat. Physics Procedia, 2012, 27, 356-359.	1.2	2
100	Characterization of Superconducting Thin Films and nanoSQUIDs for Nanoparticle Investigation at High Magnetic Field. IEEE Transactions on Applied Superconductivity, 2016, 26, 1-5.	1.7	2
101	Superconductor/Ferromagnet Nanowires for Optical Photon Detection. IEEE Transactions on Applied Superconductivity, 2016, 26, 1-4.	1.7	2
102	Phase-Slip Phenomena in Proximitized NbN/NiCu Superconducting Nanostripes. Journal of Superconductivity and Novel Magnetism, 2017, 30, 3403-3407.	1.8	2
103	Some Aspects of Self-Field Effects in Large Vanadium-Based Josephson Junctions. Physica Scripta, 1984, 29, 257-258.	2.5	1
104	High quality Nb-based junctions for superconductive detectors. Nuclear Physics, Section B, Proceedings Supplements, 1993, 32, 300-306.	0.4	1
105	High-resolution energy spectroscopy and superconductive Tunnel Junction. Il Nuovo Cimento Della SocietÃ Italiana Di Fisica C, 1993, 16, 735-742.	0.2	1
106	Set up of a nuclear radiation experiment with superconducting tunnel junctions in a compact3He cryostat. Cryogenics, 1994, 34, 243-246.	1.7	1
107	X ray response of STJs detectors with different trapping layers: Preliminary results. Nuclear Physics, Section B, Proceedings Supplements, 1995, 44, 682-687.	0.4	1
108	Sidelobe suppression in arbitrarity shaped quadrangle Josephson junctions. Journal of Low Temperature Physics, 1997, 106, 359-364.	1.4	1

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109	Proton damage on Nb-based Josephson junctions. Nuovo Cimento Della Societa Italiana Di Fisica D - Condensed Matter, Atomic, Molecular and Chemical Physics, Biophysics, 1997, 19, 1397-1404.	0.4	1
110	Development of radiation-hard particle detectors using Josephson tunnel junctions. Nuclear Physics, Section B, Proceedings Supplements, 1998, 61, 570-575.	0.4	1
111	Abrikosov Monopole Vortices and Their Images in a Circular Josephson Tunnel Junction. International Journal of Modern Physics B, 1999, 13, 1265-1270.	2.0	1
112	Annular Josephson junctions for radiation detection: fabrication and investigation of the magnetic behaviour. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2000, 444, 476-479.	1.6	1
113	Annular superconducting tunnel junction detectors: Experimental results under X-ray illumination. , 2002, , .		1
114	Recent achievements on annular Josephson structures and their application as radiation detectors. Physica C: Superconductivity and Its Applications, 2006, 435, 118-124.	1.2	1
115	Static and dynamic properties of annular Josephson junctions with injected current. Physical Review B, 2006, 73, .	3.2	1
116	Experimental characterization of NbN nanowire optical detectors with parallel stripline configuration. Journal of Physics: Conference Series, 2008, 97, 012265.	0.4	1
117	Superconducting single photon detectors based on multiple cascade switches of parallel NbN nanowires. , 2011, , .		1
118	Dark counts in superconducting single-photon NbN/NiCu detectors. , 2015, , .		1
119	Investigation of dark counts in innovative materials for superconducting nanowire single-photon detector applications. , 2017, , .		1
120	Dark counts double switching rates in NbTiN Superconducting Nanowire Single Photon Detectors. Journal of Physics: Conference Series, 2020, 1559, 012016.	0.4	1
121	Properties of Cascade Switch Superconducting Nanowire Single Photon Detectors. Lecture Notes of the Institute for Computer Sciences, Social-Informatics and Telecommunications Engineering, 2010, , 150-157.	0.3	1
122	X-ray response of Nb-based superconducting tunnel junction. European Physical Journal Special Topics, 1998, 08, Pr3-275-Pr3-278.	0.2	1
123	Role of Special Junction Configurations in the Detection Performances. Japanese Journal of Applied Physics, 1998, 37, 31.	1.5	1
124	Aspects of the temperature dependence of the maximum supercurrent in vanadium-based Josephson junctions. Physica B: Physics of Condensed Matter & C: Atomic, Molecular and Plasma Physics, Optics, 1981, 108, 989-990.	0.9	0
125	Sweep rate effects and quantum energy levels in Josephson junctions. Physica B: Condensed Matter, 1990, 165-166, 947-948.	2.7	0
126	Two-particle structures in high quality Nb/AlOx/Nb Josephson tunnel junctions. Physica B: Condensed Matter, 1994, 194-196, 1681-1682.	2.7	0

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127	Estimation of Î±-particle induced hot spot size in Nb film using Abrikosov vortices. European Physical Journal D, 1996, 46, 2881-2882.	0.4	0
128	Investigation of Fiske steps of a josephson tunnel junction with trapped Abrikosov vortices. European Physical Journal D, 1996, 46, 685-686.	0.4	0
129	X-ray response of STJ detectors using NbN absorbing layers. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 1996, 370, 95-97.	1.6	0
130	Fabrication of high-quality Josephson junctions for applications as particle detectors. Nuovo Cimento Della Societa Italiana Di Fisica D - Condensed Matter, Atomic, Molecular and Chemical Physics, Biophysics, 1997, 19, 1405-1409.	0.4	0
131	A hotspot size estimate technique by using Abrikosov vortices in Josephson tunnel junctions. Applied Superconductivity, 1998, 6, 331-335.	0.5	0
132	Effects of Quasiparticle Diffusion in Nb-Based Superconducting Tunnel Junctions Under X-Rays Irradiation. International Journal of Modern Physics B, 1999, 13, 1247-1252.	2.0	0
133	SOME ASPECTS OF SUPERCONDUCTIVE JUNCTION RADIATION DETECTORS. , 2000, , .		0
134	A double junction superconductive detector based on a single material. Journal of Physics: Conference Series, 2006, 43, 1307-1310.	0.4	0
135	Advanced superconducting optical detectors. Journal of Physics: Conference Series, 2006, 43, 1338-1341.	0.4	0
136	Injection-Detection Experiments in All Aluminum 1-D Imaging Spectrometers Based on Superconducting Tunnel Junctions. IEEE Transactions on Applied Superconductivity, 2007, 17, 302-305.	1.7	0
137	Parallel Configuration For Fast Superconducting Strip Line Detectors With Very Large Area In Time Of Flight Mass Spectrometry. , 2009, , .		0
138	Photoresponse experiments on NbN proximized nanostructures. Journal of Physics: Conference Series, 2010, 234, 042027.	0.4	0
139	Superconducting single photon detectors based on parallel NbN nanowires. Proceedings of SPIE, 2011, , .	0.8	0
140	Proximitized NbN/NiCu nanostripes as new promising superconducting single-photon detectors. Proceedings of SPIE, 2013, , .	0.8	0
141	Y-Ba-Cu-O nanostripes for optical photon detection. , 2015, , .		0
142	SNSPD with parallel nanowires (Conference Presentation). , 2017, , .		0
143	2017 16th International Superconductive Electronics Conference (ISEC). IEEE Transactions on Applied Superconductivity, 2018, 28, 1-2.	1.7	0
144	Progress towards innovative and energy efficient logic circuits. Journal of Physics: Conference Series, 2020, 1559, 012009.	0.4	0

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145	THERMAL AND QUANTUM NOISE IN OVERDAMPED JOSEPHSON JUNCTIONS. , 1986, , 289-292.		0