

# Davide Massarotti

## List of Publications by Year in descending order

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Version: 2024-02-01

66  
papers

1,461  
citations

361413  
20  
h-index

330143  
37  
g-index

70  
all docs

70  
docs citations

70  
times ranked

1472  
citing authors

| #  | ARTICLE   | IF   | CITATIONS |
|----|---|------|-----------|
| 1  | Low Cost Sensors Based on SPR in a Plastic Optical Fiber for Biosensor Implementation. <i>Sensors</i> , 2011, 11, 11752-11760.  | 3.8  | 261       |
| 2  | Tunable spin polarization and superconductivity in engineered oxide interfaces. <i>Nature Materials</i> , 2016, 15, 278-283.  | 27.5 | 104       |
| 3  | Performance Comparison of Two Sensors Based on Surface Plasmon Resonance in a Plastic Optical Fiber. <i>Sensors</i> , 2013, 13, 721-735.  | 3.8  | 98        |
| 4  | An innovative plastic optical fiber-based biosensor for new bio/applications. The case of celiac disease. <i>Sensors and Actuators B: Chemical</i> , 2013, 176, 1008-1014.                              | 7.8  | 85        |
| 5  | Influence of topological edge states on the properties of $\text{Al}/\text{NbN}$ Josephson devices. <i>Physical Review B</i> , 2014, 89, .  |      |           |
| 6  | Thermal hopping and retrapping of a Brownian particle in the tilted periodic potential of a NbN/MgO/NbN Josephson junction. <i>Physical Review B</i> , 2011, 84, .                                      | 3.2  | 50        |
| 7  | Weak localization and spin-orbit interaction in side-gate field effect devices at the $\text{LaAlO}_3/\text{SrTiO}_3$ interface. <i>Physical Review B</i> , 2014, 90, .                                 |      |           |
| 8  | Macroscopic quantum tunnelling in spin filter ferromagnetic Josephson junctions. <i>Nature Communications</i> , 2015, 6, 7376.  | 12.8 | 44        |
| 9  | Direct Transition from Quantum Escape to a Phase Diffusion Regime in YBaCuO Biepitaxial Josephson Junctions. <i>Physical Review Letters</i> , 2012, 109, 050601.  | 7.8  | 43        |
| 10 | Recent Achievements on the Physics of High-T C Superconductor Josephson Junctions: Background, Perspectives and Inspiration. <i>Journal of Superconductivity and Novel Magnetism</i> , 2013, 26, 21-41. | 1.8  | 43        |
| 11 | Signatures of unconventional superconductivity in the $\text{LaAlO}_3/\text{SrTiO}_3$ two-dimensional system. <i>Physical Review B</i> , 2017, 95, .  | 3.2  | 43        |
| 12 | RF assisted switching in magnetic Josephson junctions. <i>Journal of Applied Physics</i> , 2018, 123, .   | 2.5  | 29        |
| 13 | Resolving the effects of frequency-dependent damping and quantum phase diffusion in $\text{YBa}_2\text{Cu}_3\text{O}_7$ . <i>Physical Review B</i> , 2012, 86, 134511.                                  | 3.2  | 28        |
| 14 | Quantum crossover in moderately damped epitaxial NbN/MgO/NbN junctions with low critical current density. <i>Applied Physics Letters</i> , 2011, 99, 062510.  | 3.3  | 27        |
| 15 | Breakdown of the escape dynamics in Josephson junctions. <i>Physical Review B</i> , 2015, 92, .   | 3.2  | 26        |
| 16 | Superconductor to resistive state switching by multiple fluctuation events in NbTiN nanostrips. <i>Scientific Reports</i> , 2019, 9, 8053.  | 3.3  | 26        |
| 17 | Escape dynamics in moderately damped Josephson junctions (Review Article). <i>Low Temperature Physics</i> , 2012, 38, 263-272.  | 0.6  | 24        |
| 18 | Properties of Ferromagnetic Josephson Junctions for Memory Applications. <i>IEEE Transactions on Applied Superconductivity</i> , 2018, 28, 1-6.   | 1.7  | 24        |

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|----|---|-----|-----------|
| 19 | Tuning of Magnetic Activity in Spin-Filter Josephson Junctions Towards Spin-Triplet Transport. Physical Review Letters, 2019, 122, 047002.  | 7.8 | 24        |
| 20 | High quality factor HTS Josephson junctions on low loss substrates. Superconductor Science and Technology, 2011, 24, 045008.  | 3.5 | 21        |
| 21 | Dynamics of vortex matter in YBCO sub-micron bridges. Physica C: Superconductivity and Its Applications, 2014, 506, 188-194.  | 1.2 | 20        |
| 22 | Suspended InAs nanowire Josephson junctions assembled via dielectrophoresis. Nanotechnology, 2015, 26, 385302.  | 2.6 | 20        |
| 23 | Enhanced localized superconductivity in Sr <sub>2</sub> RuO <sub>4</sub> thin film by pulsed laser deposition. Superconductor Science and Technology, 2016, 29, 095005.                   | 3.5 | 19        |
| 24 | Characterization of scalable Josephson memory element containing a strong ferromagnet. Journal of Applied Physics, 2020, 127, .   | 2.5 | 19        |
| 25 | The influence of heat treatment on the microstructure, flux pinning and magnetic properties of bulk BSCCO samples prepared by sol-gel route. Ceramics International, 2018, 44, 5209-5218. | 4.8 | 18        |
| 26 | Statistics of localized phase slips in tunable width planar point contacts. Scientific Reports, 2017, 7, 44569.   | 3.3 | 17        |
| 27 | Electrodynamics of Highly Spin-Polarized Tunnel Josephson Junctions. Physical Review Applied, 2020, 13, .   | 3.8 | 17        |
| 28 | Coexistence and tuning of spin-singlet and triplet transport in spin-filter Josephson junctions. Communications Physics, 2022, 5, .   | 5.3 | 17        |
| 29 | Electrodynamics of Josephson junctions containing strong ferromagnets. Physical Review B, 2018, 98, .   | 3.2 | 16        |
| 30 | Geometrical vortex lattice pinning and melting in YBaCuO submicron bridges. Scientific Reports, 2016, 6, 38677.   | 3.3 | 14        |
| 31 | Towards a Hybrid High Critical Temperature Superconductor Junction With a Semiconducting InAs Nanowire Barrier. Journal of Superconductivity and Novel Magnetism, 2015, 28, 3429-3437.    | 1.8 | 12        |
| 32 | Vortex Lattice Instabilities in YBa <sub>2</sub> Cu <sub>3</sub> O <sub>7-x</sub> Nanowires. Materials, 2018, 11, 211.  | 2.9 | 12        |
| 33 | Hybrid ferromagnetic transmon qubit: Circuit design, feasibility, and detection protocols for magnetic fluctuations. Physical Review B, 2022, 105, .                                      | 3.2 | 12        |
| 34 | Synthesis and characterization of electrically conductive polyethylene-supported graphene films. Nanoscale Research Letters, 2014, 9, 475.  | 5.7 | 11        |
| 35 | 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        |
| 36 | Depairing Current at High Magnetic Fields in Vortex-Free High-Temperature Superconducting Nanowires. Nano Letters, 2019, 19, 4174-4179.   | 9.1 | 10        |

| #  | ARTICLE   | IF  | CITATIONS |
|----|---|-----|-----------|
| 37 | Inverse magnetic hysteresis of the Josephson supercurrent: Study of the magnetic properties of thin niobium/permalloy <mml:math>\text{Fe}_{3.2}\text{Al}_{10}</mml:math> Superconducting Nanowire Single-Photon Detectors. Physical Review Applied, 2022, 18, .           | 3.2 | 10        |
| 38 | Demonstration of Single Photon Detection in Amorphous Molybdenum Silicide / Aluminium Superconducting Nanostrip. IEEE Instrumentation and Measurement Magazine, 2021, 24, 69-74.  | 1.6 | 8         |
| 39 | Activation Energies in <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="block"> Mo</mml:math> <mml:math display="block">\text{Si}_{3.8}\text{Al}_{1.2}</mml:math> Superconducting Nanowire Single-Photon Detectors. Physical Review Applied, 2022, 18, . | 3.8 | 8         |
| 40 | Josephson effect in Al/Bi <sub>2</sub> Se <sub>3</sub> /Al coplanar hybrid devices. Physica C: Superconductivity and Its Applications, 2014, 503, 162-165.  | 1.2 | 7         |
| 41 | Macroscopic quantum tunneling and retrapping processes in moderately damped YBaCuO Josephson junctions. Low Temperature Physics, 2013, 39, 294-298.   | 0.6 | 6         |
| 42 | Incipient Berezinskii-Kosterlitz-Thouless transition in two-dimensional coplanar Josephson junctions. Physical Review B, 2016, 94, .  | 3.2 | 6         |
| 43 | Aluminum-ferromagnetic Josephson tunnel junctions for high quality magnetic switching devices. Applied Physics Letters, 2022, 120, .  | 3.3 | 6         |
| 44 | Bias current ramp rate dependence of the crossover temperature from Kramers to phase diffusion switching in moderately damped NbN/AlN/NbN Josephson junctions. Journal of Applied Physics, 2014, 116, 043905.   | 2.5 | 5         |
| 45 | A simple Arduino-based configuration for SPR sensors in plastic optical fibers. , 2015, , .   |     | 5         |
| 46 | Josephson Coupling in Junctions Made of Monolayer Graphene Grown on SiC. Journal of Superconductivity and Novel Magnetism, 2016, 29, 1145-1150.   | 1.8 | 5         |
| 47 | High efficiency superconducting field effect devices for oxide electronic applications. Superconductor Science and Technology, 2020, 33, 034007.  | 3.5 | 5         |
| 48 | Low temperature properties of spin filter NbN/GdN/NbN Josephson junctions. Physica C: Superconductivity and Its Applications, 2017, 533, 53-58.   | 1.2 | 4         |
| 49 | Phase Dynamics and Macroscopic Quantum Tunneling. Springer Series in Materials Science, 2019, , 455-512.  | 0.6 | 4         |
| 50 | Niobium nanoSQUIDs Based on Sandwich nanojunctions: Performance as a Function of the Temperature. IEEE Transactions on Applied Superconductivity, 2015, , 1-1.  | 1.7 | 2         |
| 51 | What happens in Josephson junctions at high critical current densities. Low Temperature Physics, 2017, 43, 816-823.   | 0.6 | 2         |
| 52 | Critical Current Suppression in Spin-Filter Josephson Junctions. Journal of Superconductivity and Novel Magnetism, 2020, 33, 3043-3049.   | 1.8 | 2         |
| 53 | Investigation of the Inverse Magnetic Hysteresis of the Josephson Supercurrent in Magnetic Josephson Junctions. IEEE Transactions on Applied Superconductivity, 2022, 32, 1-5.  | 1.7 | 2         |
| 54 | Publisher's Note: Direct Transition from Quantum Escape to a Phase Diffusion Regime in YBaCuO Biepitaxial Josephson Junctions [Phys. Rev. Lett.109, 050601 (2012)]. Physical Review Letters, 2012, 109, .   | 7.8 | 1         |

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|----|---|-----|-----------|
| 55 | Characterization of Moderately Damped Low Tc Josephson junctions through Measurements of Switching Current Distributions. Physics Procedia, 2012, 36, 110-115.                  | 1.2 | 1         |
| 56 | Study of Phase Dynamics in Moderately Damped Josephson Junctions. Journal of Superconductivity and Novel Magnetism, 2013, 26, 835-838.  | 1.8 | 1         |
| 57 | Hysteretic Critical State in Coplanar Josephson Junction with Monolayer Graphene Barrier. Journal of Superconductivity and Novel Magnetism, 2017, 30, 5-14.                     | 1.8 | 1         |
| 58 | 10. Josephson and charging effect in mesoscopic superconducting devices. , 2017, , 309-338.   |     | 1         |
| 59 | Unconventional magnetic hysteresis of the Josephson supercurrent in magnetic Josephson Junctions. , 2021, , .   |     | 1         |
| 60 | Superconducting Molybdenum Silicide nanostrips for single photon detectors. , 2021, , .   |     | 1         |
| 61 | Energy scales in YBaCuO grain boundary biepitaxial Josephson junctions. Physica C: Superconductivity and Its Applications, 2012, 479, 74-78.                                    | 1.2 | 0         |
| 62 | Effects of capacitance on phase dynamics of YBa <sub>2</sub> Cu <sub>3</sub> O <sub>7-x</sub> Josephson junctions. IEEE Transactions on Applied Superconductivity, 2014, , 1-1. | 1.7 | 0         |
| 63 | Phase dynamics of low critical current density YBCO Josephson junctions. Physica C: Superconductivity and Its Applications, 2014, 503, 113-119.                                 | 1.2 | 0         |
| 64 | Ferromagnetic Josephson Junctions for High Performance Computation. Proceedings (mdpi), 2019, 12, 16.   | 0.2 | 0         |
| 65 | Low temperature characterization of high efficiency spin-filter Josephson junctions. EPJ Web of Conferences, 2020, 233, 05007.  | 0.3 | 0         |
| 66 | Current-Voltage Characteristics. Springer Series in Materials Science, 2019, , 235-274.   | 0.6 | 0         |