# Paulo Freitas

## List of Publications by Citations



| 516 | 11,820 | 54 | 84 |
|---|---|---|---|
| papers | citations | h-index | g-index |
| 535 | 12,905 | 3.3 | 6.11 |
| ext. papers | ext. citations | avg, IF | L-index |

| # | Paper | IF | Citations |
|---|---|---|---|
| 516 | Magnetoresistive-based biosensors and biochips. *Trends in Biotechnology*, **2004**, 22, 455-62 | 15.1 | 355 |
| 515 | Magnetoresistive sensors. *Journal of Physics Condensed Matter*, **2007**, 19, 165221 | 1.8 | 289 |
| 514 | Thermodynamic fluctuations in the superconductor Y1Ba2Cu3O9- delta : Evidence for three-dimensional superconductivity. *Physical Review B*, **1987**, 36, 833-835 | 3.3 | 278 |
| 513 | Interacting ferromagnetic nanoparticles in discontinuous Co80Fe20/Al2O3 multilayers: From superspin glass to reentrant superferromagnetism. *Physical Review B*, **2001**, 63, | 3.3 | 175 |
| 512 | Large tunneling magnetoresistance enhancement by thermal anneal. *Applied Physics Letters*, **1998**, 73, 3288-3290 | 3.4 | 167 |
| 511 | Planar Hall effect sensor for magnetic micro- and nanobead detection. *Applied Physics Letters*, **2004** , 84, 4729-4731 | 3.4 | 162 |
| 510 | Biodetection using magnetically labeled biomolecules and arrays of spin valve sensors (invited). *Journal of Applied Physics*, **2003**, 93, 7281-7286 | 2.5 | 162 |
| 509 | Study of the dynamic magnetic properties of soft CoFeB films. *Journal of Applied Physics*, **2006**, 100, 053903 | 2.5 | 151 |
| 508 | Single magnetic microsphere placement and detection on-chip using current line designs with integrated spin valve sensors: Biotechnological applications. *Journal of Applied Physics*, **2002**, 91, 7786 | 2.5 | 147 |
| 507 | Phase coherent precessional magnetization reversal in microscopic spin valve elements. *Physical Review Letters*, **2003**, 90, 017201 | 7.4 | 140 |
| 506 | Femtosecond control of electric currents in metallic ferromagnetic heterostructures. *Nature Nanotechnology*, **2016**, 11, 455-8 | 28.7 | 137 |
| 505 | Collective states of interacting ferromagnetic nanoparticles. *Journal of Magnetism and Magnetic Materials*, **2006**, 300, 192-197 | 2.8 | 137 |
| 504 | Quasiballistic magnetization reversal. *Physical Review Letters*, **2003**, 90, 017204 | 7.4 | 136 |
| 503 | Observation of s-d exchange force between domain walls and electric current in very thin Permalloy films. *Journal of Applied Physics*, **1985**, 57, 1266-1269 | 2.5 | 133 |
| 502 | Overcoming the Dipolar Disorder in Dense CoFe Nanoparticle Ensembles: Superferromagnetism. *Physical Review Letters*, **2007**, 98, | 7.4 | 130 |
| 501 | High sensitivity detection of molecular recognition using magnetically labelled biomolecules and magnetoresistive sensors. *Biosensors and Bioelectronics*, **2003**, 18, 483-8 | 11.8 | 123 |
| 500 | Spin-tunnel-junction thermal stability and interface interdiffusion above 300 °C. *Applied Physics Letters*, **2000**, 76, 610-612 | 3.4 | 118 |

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| 499 | Superparamagnetism versus superspin glass behavior in dilute magnetic nanoparticle systems. *Physical Review B*, **2005**, 72, | 3.3 | 116 |
| 498 | Ion beam deposition of Mn-Ir spin valves. *IEEE Transactions on Magnetics*, **1999**, 35, 4361-4367 | 2 | 111 |
| 497 | Femtomolar limit of detection with a magnetoresistive biochip. *Biosensors and Bioelectronics*, **2009**, 24, 2690-5 | 11.8 | 99 |
| 496 | Vector network analyzer ferromagnetic resonance of thin films on coplanar waveguides: Comparison of different evaluation methods. *Journal of Applied Physics*, **2007**, 101, 074505 | 2.5 | 98 |
| 495 | Spintronic platforms for biomedical applications. *Lab on A Chip*, **2012**, 12, 546-57 | 7.2 | 96 |
| 494 | Properties of epitaxial films of YBa2Cu3O7- delta. *Physical Review B*, **1987**, 36, 8903-8906 | 3.3 | 95 |
| 493 | Radiation of spin waves by a single micrometer-sized magnetic element. *Applied Physics Letters*, **2004**, 85, 2866-2868 | 3.4 | 94 |
| 492 | Aging and memory in a superspin glass. *Physical Review B*, **2003**, 67, | 3.3 | 93 |
| 491 | High-temperature order-disorder phase transition in the superconductor Y1Ba. *Physical Review B*, **1987**, 36, 5723-5726 | 3.3 | 93 |
| 490 | Comparative study of superconducting energy gaps in oriented films and polycrystalline bulk samples of Y-Ba-Cu-O. *Physical Review Letters*, **1987**, 59, 704-707 | 7.4 | 83 |
| 489 | The electronic properties of sputtered chromium and iron oxide films. *Corrosion Science*, **2004**, 46, 1479-1499 | 1.8 | 82 |
| 488 | Low frequency picotesla field detection using hybrid MgO based tunnel sensors. *Applied Physics Letters*, **2007**, 91, 102504 | 3.4 | 78 |
| 487 | Ion beam deposition and oxidation of spin-dependent tunnel junctions. *IEEE Transactions on Magnetics*, **1999**, 35, 2952-2954 | 2 | 77 |
| 486 | Magnetic field-assisted DNA hybridisation and simultaneous detection using micron-sized spin-valve sensors and magnetic nanoparticles. *Sensors and Actuators B: Chemical*, **2005**, 107, 936-944 | 8.5 | 76 |
| 485 | . *IEEE Transactions on Magnetics*, **2019**, 55, 1-30 | 2 | 75 |
| 484 | Domain wall relaxation, creep, sliding, and switching in superferromagnetic discontinuous Co(80)Fe(20)/Al(2)O3 multilayers. *Physical Review Letters*, **2002**, 89, 137203 | 7.4 | 75 |
| 483 | Magnetoresistance enhancement in specular, bottom-pinned, Mn83Ir17 spin valves with nano-oxide layers. *Applied Physics Letters*, **2000**, 77, 1020 | 3.4 | 75 |
| 482 | Tunnel magnetoresistance and magnetic ordering in ion-beam sputtered Co80Fe20/Al2O3 discontinuous multilayers. *Journal of Applied Physics*, **2001**, 90, 4044-4048 | 2.5 | 74 |

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| 481 | Spin valve sensors. *Sensors and Actuators A: Physical*, **2000**, 81, 2-8 | 3.9 | 73 |
| 480 | Raman and infrared results on YBa2Cu3O7-x type materials. *Solid State Communications*, **1987**, 64, 471-476 | 1.6 | 72 |
| 479 | Current-induced magnetization switching in magnetic tunnel junctions. *Applied Physics Letters*, **2003**, 82, 2871-2873 | 3.4 | 70 |
| 478 | Spintronic Sensors. *Proceedings of the IEEE*, **2016**, 104, 1894-1918 | 14.3 | 69 |
| 477 | A bacteriophage detection tool for viability assessment of Salmonella cells. *Biosensors and Bioelectronics*, **2014**, 52, 239-46 | 11.8 | 68 |
| 476 | Superspin-glass nature of discontinuous Co80Fe20/Al2O3 multilayers. *Physical Review B*, **2002**, 65, | 3.3 | 68 |
| 475 | On-chip manipulation and magnetization assessment of magnetic bead ensembles by integrated spin-valve sensors. *Journal of Applied Physics*, **2002**, 91, 7445 | 2.5 | 67 |
| 474 | Challenges and trends in magnetic sensor integration with microfluidics for biomedical applications. *Journal Physics D: Applied Physics*, **2017**, 50, 213001 | 3 | 62 |
| 473 | Magnetic microbead detection using the planar Hall effect. *Journal of Magnetism and Magnetic Materials*, **2005**, 293, 677-684 | 2.8 | 61 |
| 472 | GMR sensors and magnetic nanoparticles for immuno-chromatographic assays. *Journal of Magnetism and Magnetic Materials*, **2012**, 324, 3495-3498 | 2.8 | 60 |
| 471 | A portable and autonomous magnetic detection platform for biosensing. *Sensors*, **2009**, 9, 4119-37 | 3.8 | 60 |
| 470 | Dependence of tunneling magnetoresistance on ferromagnetic electrode thickness and on the thickness of a Cu layer inserted at the Al2O3/CoFe interface. *Journal of Applied Physics*, **1999**, 85, 5264-5266 | 2.5 | 59 |
| 469 | Linearization strategies for high sensitivity magnetoresistive sensors. *EPJ Applied Physics*, **2015**, 72, 10601 | 1.1 | 58 |
| 468 | Cooperative versus superparamagnetic behavior of dense magnetic nanoparticles in Co80Fe20/Al2O3 multilayers. *Applied Physics Letters*, **2003**, 82, 4116-4118 | 3.4 | 58 |
| 467 | 1/f noise in linearized low resistance MgO magnetic tunnel junctions. *Journal of Applied Physics*, **2006**, 99, 08B314 | 2.5 | 57 |
| 466 | Low resistance spin-dependent tunnel junctions deposited with a vacuum break and radio frequency plasma oxidized. *Applied Physics Letters*, **1999**, 74, 448-450 | 3.4 | 57 |
| 465 | Effect of free layer thickness and shape anisotropy on the transfer curves of MgO magnetic tunnel junctions. *Journal of Applied Physics*, **2008**, 103, 07A910 | 2.5 | 56 |
| 464 | Improving Magnetic Field Detection Limits of Spin Valve Sensors Using Magnetic Flux Guide Concentrators. *IEEE Transactions on Magnetics*, **2007**, 43, 2376-2378 | 2 | 55 |

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| 463 | Temperature dependence and annealing effects on spin dependent tunnel junctions. *Journal of Applied Physics*, **1999**, 85, 5258-5260 | 2.5 | 55 |
| 462 | Magnetoresistive chip cytometer. *Lab on A Chip*, **2011**, 11, 2255-61 | 7.2 | 54 |
| 461 | Low frequency noise in arrays of magnetic tunnel junctions connected in series and parallel. *Journal of Applied Physics*, **2009**, 105, 113922 | 2.5 | 54 |
| 460 | Magnetic tunnel junction sensors with pTesla sensitivity. *Microsystem Technologies*, **2014**, 20, 793-802 | 1.7 | 53 |
| 459 | Challenges and trends in the development of a magnetoresistive biochip portable platform. *Journal of Magnetism and Magnetic Materials*, **2010**, 322, 1655-1663 | 2.8 | 51 |
| 458 | Integration of GMR Sensors with Different Technologies. *Sensors*, **2016**, 16, | 3.8 | 51 |
| 457 | Multifunctional magnetic-responsive hydrogels to engineer tendon-to-bone interface. *Nanomedicine: Nanotechnology, Biology, and Medicine*, **2018**, 14, 2375-2385 | 6 | 49 |
| 456 | Lab-on-chip cytometry based on magnetoresistive sensors for bacteria detection in milk. *Sensors*, **2014**, 14, 15496-524 | 3.8 | 49 |
| 455 | Tunneling hot spots and heating in magnetic tunnel junctions. *Journal of Applied Physics*, **2004**, 95, 6783-6785 | 2.5 | 47 |
| 454 | Magnetoresistance and magnetic properties of NiFe/oxide/Co junctions prepared by magnetron sputtering. *Journal of Applied Physics*, **1994**, 76, 6104-6106 | 2.5 | 47 |
| 453 | Relaxation and aging of a superferromagnetic domain state. *Physical Review B*, **2003**, 68, | 3.3 | 46 |
| 452 | Interaction of polyacrylic acid coated and non-coated iron oxide nanoparticles with human neutrophils. *Toxicology Letters*, **2014**, 225, 57-65 | 4.4 | 44 |
| 451 | Toward a magnetoresistive chip cytometer: Integrated detection of magnetic beads flowing at cm/s velocities in microfluidic channels. *Applied Physics Letters*, **2009**, 95, 034104 | 3.4 | 44 |
| 450 | Resonant tunneling through electronic trapping states in thin MgO magnetic junctions. *Physical Review Letters*, **2011**, 106, 196601 | 7.4 | 43 |
| 449 | Spin dependent tunnel junctions for memory and read-head applications. *IEEE Transactions on Magnetics*, **2000**, 36, 2796-2801 | 2 | 43 |
| 448 | Spin valve sensors with synthetic free and pinned layers. *Journal of Applied Physics*, **2000**, 87, 5744-5746 | 2.5 | 43 |
| 447 | Quantitative biomolecular sensing station based on magnetoresistive patterned arrays. *Biosensors and Bioelectronics*, **2012**, 35, 206-212 | 11.8 | 42 |
| 446 | Exchange enhancement and thermal anneal in Mn76Ir24 bottom-pinned spin valves. *Journal of Applied Physics*, **2001**, 89, 6904-6906 | 2.5 | 42 |

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| 445 | Electrode roughness and interfacial mixing effects on the tunnel junction thermal stability. *Journal of Applied Physics*, **2001**, 89, 6650-6652 | 2.5 | 42 |
| 444 | Technological advances in bovine mastitis diagnosis: an overview. *Journal of Veterinary Diagnostic Investigation*, **2015**, 27, 665-72 | 1.5 | 41 |
| 443 | Seebeck rectification enabled by intrinsic thermoelectrical coupling in magnetic tunneling junctions. *Physical Review Letters*, **2012**, 109, 037206 | 7.4 | 41 |
| 442 | Fast and efficient microfluidic cell filter for isolation of circulating tumor cells from unprocessed whole blood of colorectal cancer patients. *Scientific Reports*, **2019**, 9, 8032 | 4.9 | 40 |
| 441 | MgO based picotesla field sensors. *Journal of Applied Physics*, **2008**, 103, 07E931 | 2.5 | 40 |
| 440 | Exploring the Potential of Starch/Polycaprolactone Aligned Magnetic Responsive Scaffolds for Tendon Regeneration. *Advanced Healthcare Materials*, **2016**, 5, 213-22 | 10.1 | 40 |
| 439 | Large Area and Low Aspect Ratio Linear Magnetic Tunnel Junctions With a Soft-Pinned Sensing Layer. *IEEE Transactions on Magnetics*, **2012**, 48, 3719-3722 | 2 | 39 |
| 438 | Universal and scaled relaxation of interacting magnetic nanoparticles. *Physical Review B*, **2004**, 70, | 3.3 | 39 |
| 437 | High thermal stability tunnel junctions. *Journal of Applied Physics*, **2000**, 87, 6058-6060 | 2.5 | 39 |
| 436 | Lab-on-Chip Devices: Gaining Ground Losing Size. *ACS Nano*, **2017**, 11, 10659-10664 | 16.7 | 38 |
| 435 | Magneto-mechanical actuation of magnetic responsive fibrous scaffolds boosts tenogenesis of human adipose stem cells. *Nanoscale*, **2019**, 11, 18255-18271 | 7.7 | 38 |
| 434 | Hybrid magnetoresistive□microelectromechanical devices for static field modulation and sensor 1f□ noise cancellation. *Journal of Applied Physics*, **2008**, 103, 07E924 | 2.5 | 38 |
| 433 | 40% tunneling magnetoresistance after anneal at 380 °C for tunnel junctions with iron□xide interface layers. *Journal of Applied Physics*, **2001**, 89, 6665-6667 | 2.5 | 38 |
| 432 | Phonons in YBa2Cu3O7- delta -type materials. *Physical Review B*, **1988**, 37, 5171-5174 | 3.3 | 38 |
| 431 | Detection of BCG bacteria using a magnetoresistive biosensor: A step towards a fully electronic platform for tuberculosis point-of-care detection. *Biosensors and Bioelectronics*, **2018**, 100, 259-265 | 11.8 | 36 |
| 430 | Low-Frequency Noise in MgO Magnetic Tunnel Junctions: Hooge's Parameter Dependence on Bias Voltage. *IEEE Transactions on Magnetics*, **2008**, 44, 2569-2572 | 2 | 36 |
| 429 | Spin-valve sensors exchange-biased by ultrathin TbCo films. *Applied Physics Letters*, **1994**, 65, 493-495 | 3.4 | 36 |
| 428 | Performance enhanced UV/vis spectroscopic microfluidic sensor for ascorbic acid quantification in human blood. *Biosensors and Bioelectronics*, **2016**, 85, 568-572 | 11.8 | 36 |

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| 427 | Field detection in MgO magnetic tunnel junctions with superparamagnetic free layer and magnetic flux concentrators. *Journal of Applied Physics*, **2009**, 105, 07E722 | 2.5 | 35 |
| 426 | Rapid DNA hybridization based on ac field focusing of magnetically labeled target DNA. *Applied Physics Letters*, **2005**, 87, 013901 | 3.4 | 35 |
| 425 | Coherent suppression of magnetic ringing in microscopic spin valve elements. *Applied Physics Letters*, **2002**, 80, 3781-3783 | 3.4 | 35 |
| 424 | Spin-dependent tunnel junctions with ZrOx barriers. *Applied Physics Letters*, **2001**, 79, 4387-4389 | 3.4 | 35 |
| 423 | Low-resistance spin-dependent tunnel junctions with ZrAlOx barriers. *Applied Physics Letters*, **2001**, 79, 4553-4555 | 3.4 | 35 |
| 422 | Detection of cystic fibrosis related DNA targets using AC field focusing of magnetic labels and spin-valve sensors. *IEEE Transactions on Magnetics*, **2005**, 41, 4140-4142 | 2 | 33 |
| 421 | Synthetic ferrimagnet free layer tunnel junction for magnetic random access memories. *Journal of Applied Physics*, **2002**, 91, 7700 | 2.5 | 33 |
| 420 | Influence of Ta antidiffusion barriers on the thermal stability of tunnel junctions. *Applied Physics Letters*, **2000**, 76, 3792-3794 | 3.4 | 33 |
| 419 | Implementing a strategy for on-chip detection of cell-free DNA fragments using GMR sensors: A translational application in cancer diagnostics using ALU elements. *Analytical Methods*, **2016**, 8, 119-128 | 3.2 | 32 |
| 418 | OPTIMIZATION AND INTEGRATION OF MAGNETORESISTIVE SENSORS. *Spin*, **2011**, 01, 71-91 | 1.3 | 32 |
| 417 | Detection of 130nm magnetic particles by a portable electronic platform using spin valve and magnetic tunnel junction sensors. *Journal of Applied Physics*, **2008**, 103, 07A310 | 2.5 | 32 |
| 416 | Low-current blocking temperature writing of double barrier magnetic random access memory cells. *Applied Physics Letters*, **2004**, 84, 945-947 | 3.4 | 32 |
| 415 | Resistance decrease in spin tunnel junctions by control of natural oxidation conditions. *Applied Physics Letters*, **2001**, 79, 2219-2221 | 3.4 | 32 |
| 414 | Tunneling magnetoresistance and current distribution effect in spin-dependent tunnel junctions. *Journal of Applied Physics*, **1998**, 83, 6694-6696 | 2.5 | 32 |
| 413 | Spin transfer torque driven higher-order propagating spin waves in nano-contact magnetic tunnel junctions. *Nature Communications*, **2018**, 9, 4374 | 17.4 | 32 |
| 412 | Graphene field-effect transistor array with integrated electrolytic gates scaled to 200 mm. *Journal of Physics Condensed Matter*, **2016**, 28, 085302 | 1.8 | 31 |
| 411 | Biosensors for On-Farm Diagnosis of Mastitis. *Frontiers in Bioengineering and Biotechnology*, **2019**, 7, 186 | 5.8 | 31 |
| 410 | In Vivo Magnetic Recording of Neuronal Activity. *Neuron*, **2017**, 95, 1283-1291.e4 | 13.9 | 31 |

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| 409 | Training effect in specular spin valves. *Physical Review B*, **2008**, 77, | 3.3 | 31 |
| 408 | Transport mechanisms in Y1Ba2Cu3O6+ delta superconductors in the metallic and the semiconducting regimes. *Physical Review B*, **1988**, 37, 3657-3659 | 3.3 | 31 |
| 407 | Magnetic field sensor with voltage-tunable sensing properties. *Applied Physics Letters*, **2012**, 101, 192401 | 3.4 | 30 |
| 406 | Superferromagnetic domain state of a discontinuous metal insulator multilayer. *Physical Review B*, **2005**, 72, | 3.3 | 30 |
| 405 | Tuning of MgO barrier magnetic tunnel junction bias current for picotesla magnetic field detection. *Journal of Applied Physics*, **2006**, 99, 08K706 | 2.5 | 29 |
| 404 | Characterization of CoFeB electrodes for tunnel junctions. *Journal of Applied Physics*, **2005**, 97, 10C916 | 2.5 | 29 |
| 403 | Electromigration in thin tunnel junctions with ferromagnetic/nonmagnetic electrodes: Nanoconstrictions, local heating, and direct and wind forces. *Physical Review B*, **2005**, 72, | 3.3 | 29 |
| 402 | Room temperature direct detection of low frequency magnetic fields in the 100 pT/Hz0.5 range using large arrays of magnetic tunnel junctions. *Journal of Applied Physics*, **2014**, 115, 17E501 | 2.5 | 28 |
| 401 | Magnetic Tunnel Junctions Based on Out-of-Plane Anisotropy Free and In-Plane Pinned Layer Structures for Magnetic Field Sensors. *IEEE Transactions on Magnetics*, **2012**, 48, 3840-3842 | 2 | 28 |
| 400 | Toward a system to measure action potential on mice brain slices with local magnetoresistive probes. *Journal of Applied Physics*, **2011**, 109, 07B308 | 2.5 | 28 |
| 399 | Electroforming, magnetic and resistive switching in MgO-based tunnel junctions. *Journal Physics D: Applied Physics*, **2009**, 42, 105407 | 3 | 28 |
| 398 | Current-induced switching in low resistance magnetic tunnel junctions. *Journal of Applied Physics*, **2003**, 93, 8385-8387 | 2.5 | 28 |
| 397 | Spin-valve structures exchange biased with a-Tb0.23Co0.77 layers. *Journal of Applied Physics*, **1994**, 75, 6480-6482 | 2.5 | 28 |
| 396 | MgO-based magnetic tunnel junction sensors array for non-destructive testing applications. *Journal of Applied Physics*, **2014**, 115, 17E513 | 2.5 | 27 |
| 395 | Exchange-biased planar Hall effect sensor optimized for biosensor applications. *Journal of Applied Physics*, **2008**, 103, 07A302 | 2.5 | 27 |
| 394 | Field detection in single and double barrier MgO magnetic tunnel junction sensors. *Journal of Applied Physics*, **2008**, 103, 07E922 | 2.5 | 27 |
| 393 | Diode/magnetic tunnel junction cell for fully scalable matrix-based biochip. *Journal of Applied Physics*, **2006**, 99, 08B307 | 2.5 | 27 |
| 392 | Giant magnetoresistive sensors for rotational speed control. *Journal of Applied Physics*, **1999**, 85, 5459-5461 | 2.5 | 27 |

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| 391 | Hybrid Integration of Magnetoresistive Sensors with MEMS as a Strategy to Detect Ultra-Low Magnetic Fields. *Micromachines*, **2016**, 7, | 3.3 | 27 |
| 390 | Domain imaging, MOKE and magnetoresistance studies of CoFeB films for MRAM applications. *Materials Science and Engineering B: Solid-State Materials for Advanced Technology*, **2006**, 126, 180-186 | 3.1 | 26 |
| 389 | Cole-Cole Analysis of the Superspin Glass System Co 80 Fe 20 /Al 2 O 3. *Phase Transitions*, **2003**, 76, 367-375 | 1.5 | 26 |
| 388 | Dynamic heating in submicron size magnetic tunnel junctions with exchange biased storage layer. *Journal of Applied Physics*, **2005**, 97, 10P501 | 2.5 | 26 |
| 387 | Annealing effect of magnetic tunnel junctions with one FeOx layer inserted at the Al2O3/CoFe interface. *Applied Physics Letters*, **2001**, 78, 2911-2913 | 3.4 | 26 |
| 386 | Transport properties of discontinuous Co/sub 80/Fe/sub 20//Al/sub 2/O/sub 3/ multilayers, prepared by ion beam sputtering. *IEEE Transactions on Magnetics*, **1999**, 35, 2895-2897 | 2 | 26 |
| 385 | Eddy currents testing probe with magneto-resistive sensors and differential measurement. *Sensors and Actuators A: Physical*, **2014**, 212, 58-67 | 3.9 | 25 |
| 384 | Towards picoTesla Magnetic Field Detection Using a GMR-MEMS Hybrid Device. *IEEE Transactions on Magnetics*, **2012**, 48, 4115-4118 | 2 | 25 |
| 383 | Integration of TMR Sensors in Silicon Microneedles for Magnetic Measurements of Neurons. *IEEE Transactions on Magnetics*, **2013**, 49, 3512-3515 | 2 | 24 |
| 382 | Strategies for pTesla Field Detection Using Magnetoresistive Sensors With a Soft Pinned Sensing Layer. *IEEE Transactions on Magnetics*, **2015**, 51, 1-4 | 2 | 24 |
| 381 | Polyacrylic acid coated and non-coated iron oxide nanoparticles are not genotoxic to human T lymphocytes. *Toxicology Letters*, **2015**, 234, 67-73 | 4.4 | 24 |
| 380 | Field Detection in Spin Valve Sensors Using CoFeB/Ru Synthetic-Antiferromagnetic Multilayers as Magnetic Flux Concentrators. *IEEE Transactions on Magnetics*, **2012**, 48, 3847-3850 | 2 | 24 |
| 379 | Resistive switching in nanostructured thin films. *Applied Physics Letters*, **2009**, 94, 202107 | 3.4 | 24 |
| 378 | Semi-Quantitative Method for Streptococci Magnetic Detection in Raw Milk. *Biosensors*, **2016**, 6, 19 | 5.9 | 24 |
| 377 | Exploring sialyl-Tn expression in microfluidic-isolated circulating tumour cells: A novel biomarker and an analytical tool for precision oncology applications. *New Biotechnology*, **2019**, 49, 77-87 | 6.4 | 24 |
| 376 | Influence of the thermal interface resistance on the thermovoltage of a magnetic tunnel junction. *Physical Review B*, **2017**, 95, | 3.3 | 23 |
| 375 | Versatile, high sensitivity, and automatized angular dependent vectorial Kerr magnetometer for the analysis of nanostructured materials. *Review of Scientific Instruments*, **2011**, 82, 043902 | 1.7 | 23 |
| 374 | 1/f Magnetic Noise Dependence on Free Layer Thickness in Hysteresis Free MgO Magnetic Tunnel Junctions. *IEEE Transactions on Magnetics*, **2008**, 44, 2551-2553 | 2 | 23 |

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| 373 | Magnetoresistive DNA chips based on ac field focusing of magnetic labels. *Journal of Applied Physics*, **2006**, 99, 08P105 | 2.5 | 23 |
| 372 | Integrated giant magnetoresistance bridge sensors with transverse permanent magnet biasing. *Journal of Applied Physics*, **2000**, 87, 5353-5355 | 2.5 | 23 |
| 371 | Influence of ion beam milling parameters on MRAM switching. *IEEE Transactions on Magnetics*, **2001**, 37, 1973-1975 | 2 | 23 |
| 370 | On the temperature dependence of the magnetoresistance of ferromagnetic alloys. *Journal of Applied Physics*, **1988**, 64, 5459-5461 | 2.5 | 23 |
| 369 | High-Resolution Nondestructive Test Probes Based on Magnetoresistive Sensors. *IEEE Transactions on Industrial Electronics*, **2019**, 66, 7326-7337 | 8.9 | 23 |
| 368 | Magnetic field sensing characteristics of MgO based tunneling magnetoresistance devices with Co40Fe40B20 and Co60Fe20B20 electrodes. *Sensors and Actuators A: Physical*, **2013**, 202, 64-68 | 3.9 | 22 |
| 367 | Magnetoresistive Detection of Magnetic Beads Flowing at High Speed in Microfluidic Channels. *IEEE Transactions on Magnetics*, **2009**, 45, 4873-4876 | 2 | 22 |
| 366 | Low aspect ratio micron size tunnel magnetoresistance sensors with permanent magnet biasing integrated in the top lead. *Journal of Applied Physics*, **2011**, 109, 07E506 | 2.5 | 22 |
| 365 | A New Hand-Held Microsystem Architecture for Biological Analysis. *IEEE Transactions on Circuits and Systems Part 1: Regular Papers*, **2006**, 53, 2384-2395 | | 22 |
| 364 | Continuous thin barriers for low-resistance spin-dependent tunnel junctions. *Journal of Applied Physics*, **2003**, 93, 8367-8369 | 2.5 | 22 |
| 363 | Functionalization of single-layer graphene for immunoassays. *Applied Surface Science*, **2019**, 480, 709-716 | 6.7 | 21 |
| 362 | Polyacrylic acid-coated and non-coated iron oxide nanoparticles induce cytokine activation in human blood cells through TAK1, p38 MAPK and JNK pro-inflammatory pathways. *Archives of Toxicology*, **2015**, 89, 1759-69 | 5.8 | 21 |
| 361 | Hybrid GMR Sensor Detecting 950 pT/sqrt(Hz) at 1 Hz and Room Temperature. *Sensors*, **2018**, 18, | 3.8 | 21 |
| 360 | 2-Axis Magnetometers Based on Full Wheatstone Bridges Incorporating Magnetic Tunnel Junctions Connected in Series. *IEEE Transactions on Magnetics*, **2012**, 48, 4107-4110 | 2 | 21 |
| 359 | Integration of Magnetoresistive Biochips on a CMOS Circuit. *IEEE Transactions on Magnetics*, **2012**, 48, 3784-3787 | 2 | 21 |
| 358 | Three dimensional magnetic flux concentrators with improved efficiency for magnetoresistive sensors. *Journal of Applied Physics*, **2011**, 109, 07E521 | 2.5 | 21 |
| 357 | Hybrid Magnetic Tunnel Junction-MEMS High Frequency Field Modulator for 1/f Noise Suppression. *IEEE Transactions on Magnetics*, **2008**, 44, 2554-2557 | 2 | 21 |
| 356 | Magnetic biosensors for genetic screening of cystic fibrosis. *IET Circuits, Devices and Systems*, **2005**, 152, 393 | | 21 |

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| 355 | Interference-blind microfluidic sensor for ascorbic acid determination by UV/vis spectroscopy. *Sensors and Actuators B: Chemical*, **2016**, 224, 668-675 | 8.5 | 20 |
| 354 | Single molecule actuation and detection on a lab-on-a-chip magnetoresistive platform. *Journal of Applied Physics*, **2011**, 109, 064702 | 2.5 | 20 |
| 353 | Spin valve heads with a corrosion resistant MnRh exchange layer. *IEEE Transactions on Magnetics*, **1998**, 34, 2343-2347 | 2 | 20 |
| 352 | Crossover in heating regimes of thermally assisted magnetic memories. *Journal of Applied Physics*, **2006**, 99, 08N904 | 2.5 | 20 |
| 351 | Ferromagnetic coupling field reduction in CoFeB tunnel junctions deposited by ion beam. *IEEE Transactions on Magnetics*, **2004**, 40, 2272-2274 | 2 | 20 |
| 350 | Biodistribution of polyacrylic acid-coated iron oxide nanoparticles is associated with proinflammatory activation and liver toxicity. *Journal of Applied Toxicology*, **2016**, 36, 1321-31 | 4.1 | 20 |
| 349 | Magnetic tunnel junction based eddy current testing probe for detection of surface defects. *Journal of Applied Physics*, **2014**, 115, 17E516 | 2.5 | 19 |
| 348 | Giant intrinsic thermomagnetic effects in thin MgO magnetic tunnel junctions. *Applied Physics Letters*, **2013**, 102, 212413 | 3.4 | 19 |
| 347 | Single-particle blocking and collective magnetic states in discontinuous CoFe/Al2O3multilayers. *Journal Physics D: Applied Physics*, **2010**, 43, 474002 | 3 | 19 |
| 346 | Analytical compact modeling of GMR based current sensors: Application to power measurement at the IC level. *Solid-State Electronics*, **2010**, 54, 1606-1612 | 1.7 | 19 |
| 345 | Ion beam assisted deposition of MgO barriers for magnetic tunnel junctions. *Journal of Applied Physics*, **2008**, 103, 07A905 | 2.5 | 19 |
| 344 | Pinholes and temperature-dependent transport properties of MgO magnetic tunnel junctions. *Physical Review B*, **2008**, 78, | 3.3 | 19 |
| 343 | Two-dimensional patterns of spin-wave radiation by rectangular spin-valve elements. *Journal of Applied Physics*, **2005**, 97, 10A717 | 2.5 | 19 |
| 342 | Tunnel junctions with AlN barriers and FeTaN electrodes. *Journal of Applied Physics*, **2001**, 89, 6868-6870 | 2.5 | 19 |
| 341 | Mechanism of exchange anisotropy and thermal stability of spin valves biased with ultrathin TbCo layers. *Journal of Applied Physics*, **1998**, 83, 2851-2856 | 2.5 | 19 |
| 340 | Design, fabrication and test of an integrated multi-microchannel heat sink for electronics cooling. *Sensors and Actuators A: Physical*, **2015**, 235, 14-27 | 3.9 | 18 |
| 339 | A CMOS Front-End With Integrated Magnetoresistive Sensors for Biomolecular Recognition Detection Applications. *IEEE Transactions on Biomedical Circuits and Systems*, **2017**, 11, 988-1000 | 5.1 | 18 |
| 338 | High power and low critical current density spin transfer torque nano-oscillators using MgO barriers with intermediate thickness. *Scientific Reports*, **2017**, 7, 7237 | 4.9 | 18 |

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