# Alberto J Palma

List of Publications by Year
in descending order



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|---|---|---|---|
| 106 papers | 3,493 citations | 159585 30 h-index | 155660 55 g-index |
| 106 all docs | 106 docs citations | 106 times ranked | 3633 citing authors |

| # | Article | IF | Citations |
|---|---|---|---|
| 1 | Smartphone-Based Simultaneous pH and Nitrite Colorimetric Determination for Paper Microfluidic Devices. Analytical Chemistry, 2014, 86, 9554-9562. | 6.5 | 348 |
| 2 | Recent developments in computer vision-based analytical chemistry: A tutorial review. Analytica Chimica Acta, 2015, 899, 23-56. | 5.4 | 220 |
| 3 | Mobile phone platform as portable chemical analyzer. Sensors and Actuators B: Chemical, 2011, 156, 350-359. | 7.8 | 145 |
| 4 | Recent developments in handheld and portable optosensingâ€"A review. Analytica Chimica Acta, 2011, 696, 27-46. | 5.4 | 127 |
| 5 | Design and characterization of a low thermal drift capacitive humidity sensor by inkjet-printing. Sensors and Actuators B: Chemical, 2014, 195, 123-131. | 7.8 | 118 |
| 6 | Properties and Printability of Inkjet and Screen-Printed Silver Patterns for RFID Antennas. Journal of Electronic Materials, 2014, 43, 604-617. | 2.2 | 117 |
| 7 | Quantum two-dimensional calculation of time constants of random telegraph signals in metal-oxideâ€"semiconductor structures. Physical Review B, 1997, 56, 9565-9574. | 3.2 | 116 |
| 8 | Using the mobile phone as Munsell soil-colour sensor: An experiment under controlled illumination conditions. Computers and Electronics in Agriculture, 2013, 99, 200-208. | 7.7 | 113 |
| 9 | Physical model for trap-assisted inelastic tunneling in metal-oxide-semiconductor structures. Journal of Applied Physics, 2001, 90, 3396-3404. | 2.5 | 89 |
| 10 | A comprehensive model for Coulomb scattering in inversion layers. Journal of Applied Physics, 1994, 75, 924-934. | 2.5 | 83 |
| 11 | Evaluation of a low-cost commercial mosfet as radiation dosimeter. Sensors and Actuators A: Physical, 2006, 125, 288-295. | 4.1 | 80 |
| 12 | Fast prototyping of paper-based microfluidic devices by contact stamping using indelible ink. RSC Advances, 2013, 3, 18811. | 3.6 | 80 |
| 13 | Flexible Passive near Field Communication Tag for Multigas Sensing. Analytical Chemistry, 2017, 89, 1697-1703. | 6.5 | 78 |
| 14 | Direct and trap-assisted elastic tunneling through ultrathin gate oxides. Journal of Applied Physics, 2002, 91, 5116-5124. | 2.5 | 77 |
| 15 | Screen Printed Flexible Radiofrequency Identification Tag for Oxygen Monitoring. Analytical Chemistry, 2013, 85, 11098-11105. | 6.5 | 76 |
| 16 | Smart facemask for wireless CO2 monitoring. Nature Communications, 2022, 13, 72. | 12.8 | 73 |
| 17 | Effects of the inversion-layer centroid on the performance of double-gate MOSFETs. IEEE Transactions on Electron Devices, 2000, 47, 141-146. | 3.0 | 72 |
| 18 | A novel electrode structure compared with interdigitated electrodes as capacitive sensor. Sensors and Actuators B: Chemical, 2014, 204, 552-560. | 7.8 | 68 |

| # | Article | IF | Citations |
|---|---|---|---|
| 19 | Printed electrodes structures as capacitive humidity sensors: A comparison. Sensors and Actuators A: Physical, 2016, 244, 56-65. | 4.1 | 68 |
| 20 | Development of an Electrical Capacitance Tomography system using four rotating electrodes. Sensors and Actuators A: Physical, 2008, 148, 366-375. | 4.1 | 60 |
| 21 | Efficient wavelet-based ECG processing for single-lead FHR extraction. , 2013, 23, 1897-1909. | | 59 |
| 22 | Passive UHF RFID Tag with Multiple Sensing Capabilities. Sensors, 2015, 15, 26769-26782. | 3.8 | 57 |
| 23 | A simple subthreshold swing model for short channel MOSFETs. Solid-State Electronics, 2001, 45, 391-397. | 1.4 | 56 |
| 24 | HF RFID Tag as Humidity Sensor: Two Different Approaches. IEEE Sensors Journal, 2015, 15, 5726-5733. | 4.7 | 45 |
| 25 | Design and Development of Sensing RFID Tags on Flexible Foil Compatible With EPC Gen 2. IEEE Sensors Journal, 2014, 14, 4361-4371. | 4.7 | 44 |
| 26 | Noise Suppression in ECG Signals through Efficient One-Step Wavelet Processing Techniques. Journal of Applied Mathematics, 2013, 2013, 1-13. | 0.9 | 42 |
| 27 | Sensor array-based optical portable instrument for determination of pH. Sensors and Actuators B: Chemical, 2011, 156, 840-848. | 7.8 | 36 |
| 28 | General-purpose passive wireless pointâ€“ofâ€“care platform based on smartphone. Biosensors and Bioelectronics, 2019, 141, 111360. | 10.1 | 36 |
| 29 | A printed capacitiveâ€“resistive double sensor for toluene and moisture sensing. Sensors and Actuators B: Chemical, 2015, 210, 542-549. | 7.8 | 35 |
| 30 | Flexible ECG acquisition system based on analog and digital reconfigurable devices. Sensors and Actuators A: Physical, 2011, 165, 261-270. | 4.1 | 34 |
| 31 | Printed single-chip UHF passive radio frequency identification tags with sensing capability. Sensors and Actuators A: Physical, 2014, 220, 281-289. | 4.1 | 33 |
| 32 | A Portable Luminometer with a Disposable Electrochemiluminescent Biosensor for Lactate Determination. Sensors, 2009, 9, 7694-7710. | 3.8 | 31 |
| 33 | Wireless wearable wristband for continuous sweat pH monitoring. Sensors and Actuators B: Chemical, 2021, 327, 128948. | 7.8 | 30 |
| 34 | Oxygen-sensing film coated photodetectors for portable instrumentation. Analytica Chimica Acta, 2007, 583, 166-173. | 5.4 | 28 |
| 35 | Passive UHF RFID Tag for Multispectral Assessment. Sensors, 2016, 16, 1085. | 3.8 | 28 |
| 36 | Microcontroller-based portable instrument for stabilised optical oxygen sensor. Sensors and Actuators B: Chemical, 2007, 121, 629-638. | 7.8 | 25 |

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|---|---|---|---|
| 37 | An application of reconfigurable technologies for non-invasive fetal heart rate extraction. Medical Engineering and Physics, 2013, 35, 1005-1014. | 1.7 | 25 |
| 38 | Evaluation of a reconfigurable portable instrument for copper determination based on luminescent carbon dots. Analytical and Bioanalytical Chemistry, 2016, 408, 3013-3020. | 3.7 | 25 |
| 39 | Readout techniques for linearity and resolution improvements in MOSFET dosimeters. Sensors and Actuators A: Physical, 2010, 157, 178-184. | 4.1 | 24 |
| 40 | Embedded sensor insole for wireless measurement of gait parameters. Australasian Physical and Engineering Sciences in Medicine, 2014, 37, 25-35. | 1.3 | 24 |
| 41 | A compact and low cost dosimetry system based on MOSFET for in vivo radiotherapy. Sensors and Actuators A: Physical, 2012, 182, 146-152. | 4.1 | 22 |
| 42 | Compact optical instrument for simultaneous determination of oxygen and carbon dioxide. Mikrochimica Acta, 2011, 172, 455-464. | 5.0 | 20 |
| 43 | Measuring the colour of virgin olive oils in a new colour scale using a low-cost portable electronic device. Journal of Food Engineering, 2012, 111, 247-254. | 5.2 | 20 |
| 44 | General purpose MOSFETs for the dosimetry of electron beams used in intra-operative radiotherapy. Sensors and Actuators A: Physical, 2014, 210, 175-181. | 4.1 | 20 |
| 45 | Effects of oxide-charge space correlation on electron mobility in inversion layers. Semiconductor Science and Technology, 1994, 9, 1102-1107. | 2.0 | 19 |
| 46 | Portable reconfigurable instrument for analytical determinations using disposable electrochemiluminescent screen-printed electrodes. Sensors and Actuators B: Chemical, 2012, 169, 46-53. | 7.8 | 19 |
| 47 | Hand-held optical instrument for CO2 in gas phase based on sensing film coating optoelectronic elements. Sensors and Actuators B: Chemical, 2010, 144, 232-238. | 7.8 | 18 |
| 48 | Electric Field Dependence of the Electron Capture Cross Section of Neutral Traps in SiO2. Journal of the Electrochemical Society, 1996, 143, 2687-2690. | 2.9 | 17 |
| 49 | A simplified measurement procedure and portable electronic photometer for disposable sensors based on ionophore-chromoionophore chemistry for potassium determination. Analytical and Bioanalytical Chemistry, 2006, 386, 1215-1224. | 3.7 | 16 |
| 50 | Improved manufacturing process for printed cantilevers by using water removable sacrificial substrate. Sensors and Actuators A: Physical, 2015, 235, 171-181. | 4.1 | 16 |
| 51 | Influence of mobility fluctuations on random telegraph signal amplitude in n-channel metalâ€“oxideâ€“semiconductor field-effect transistors. Journal of Applied Physics, 1997, 82, 4621-4628. | 2.5 | 15 |
| 52 | Compact readout system for chipless passive LC tags and its application for humidity monitoring. Sensors and Actuators A: Physical, 2018, 280, 287-294. | 4.1 | 15 |
| 53 | Open Air Calibration with Temperature Compensation of a Luminescence Quenching-Based Oxygen Sensor for Portable Instrumentation. Analytical Chemistry, 2007, 79, 3173-3179. | 6.5 | 14 |
| 54 | Comparative study of MOSFET response to photon and electron beams in reference conditions. Sensors and Actuators A: Physical, 2015, 225, 95-102. | 4.1 | 14 |

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|---|---|---|---|
| 55 | Flexible passive tag based on light energy harvesting for gas threshold determination in sealed environments. Sensors and Actuators B: Chemical, 2016, 236, 226-232. | 7.8 | 14 |
| 56 | Readout Circuit With Improved Sensitivity for Contactless LC Sensing Tags. IEEE Sensors Journal, 2020, 20, 885-891. | 4.7 | 14 |
| 57 | Contribution of injection in current noise due to generation and recombination of carriers in pâ€“n junctions. Journal of Applied Physics, 2001, 90, 3998-4006. | 2.5 | 13 |
| 58 | Portable system for photodiode-based electrochemiluminescence measurement with improved limit of detection. Sensors and Actuators B: Chemical, 2015, 221, 956-961. | 7.8 | 13 |
| 59 | Dose verification system based on MOS transistor for real-time measurement. Sensors and Actuators A: Physical, 2016, 247, 269-276. | 4.1 | 13 |
| 60 | A compact dosimetric system for MOSFETs based on passive NFC tag and smartphone. Sensors and Actuators A: Physical, 2017, 267, 82-89. | 4.1 | 13 |
| 61 | Asymmetric enhanced surface interdigitated electrode capacitor with two out-of-plane electrodes. Sensors and Actuators B: Chemical, 2018, 254, 588-596. | 7.8 | 13 |
| 62 | Fast lifetime and amplitude determination in luminescence exponential decays. Sensors and Actuators B: Chemical, 2015, 216, 595-602. | 7.8 | 12 |
| 63 | Light-Dependent Resistors as Dosimetric Sensors in Radiotherapy. Sensors, 2020, 20, 1568. | 3.8 | 12 |
| 64 | Portable light-emitting diode-based photometer with one-shot optochemical sensors for measurement in the field. Review of Scientific Instruments, 2008, 79, 103105. | 1.3 | 11 |
| 65 | A Compact Optical Instrument with Artificial Neural Network for pH Determination. Sensors, 2012, 12, 6746-6763. | 3.8 | 11 |
| 66 | Smartphone-Based Diagnosis of Parasitic Infections With Colorimetric Assays in Centrifuge Tubes. IEEE Access, 2019, 7, 185677-185686. | 4.2 | 11 |
| 67 | Digital and Analog Reconfiguration Techniques for Rapid Smart Sensor System Prototyping. Sensor Letters, 2009, 7, 1113-1118. | 0.4 | 11 |
| 68 | Accuracy Improvement of MOSFET Dosimeters in Case of Variation in Thermal Parameters. IEEE Transactions on Nuclear Science, 2015, 62, 487-493. | 2.0 | 10 |
| 69 | Accurate determination of majority thermal-capture cross sections of deep impurities inp-njunctions. Journal of Applied Physics, 1993, 74, 2605-2612. | 2.5 | 9 |
| 70 | Influence of the doping profile and deep level trap characteristics on generation-recombination noise. Journal of Applied Physics, 1997, 82, 3351-3357. | 2.5 | 9 |
| 71 | Random telegraph signal amplitude in submicron n-channel metal oxide semiconductor field effect transistors. Applied Physics Letters, 1997, 70, 2153-2155. | 3.3 | 9 |
| 72 | Modeling of retention time degradation due to inelastic trap-assisted tunneling in EEPROM devices. Microelectronics Reliability, 2003, 43, 1495-1500. | 1.7 | 9 |

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|---|---|---|---|
| 73 | Multisensor probe for soil monitoring. Sensors and Actuators B: Chemical, 2011, 160, 52-58. | 7.8 | 9 |
| 74 | Monte Carlo study of the statistics of electron capture by shallow donors in silicon at low temperatures. Physical Review B, 1995, 51, 14147-14151. | 3.2 | 8 |
| 75 | Passive UHF RFID tag for spectral fingerprint measurement. , 2015, , . | | 8 |
| 76 | Generation-recombination noise in highly asymmetrical pâ€“n junctions. Journal of Applied Physics, 2002, 92, 320-329. | 2.5 | 7 |
| 77 | Validation of Instrumented Insoles for Measuring Height in Vertical Jump. International Journal of Sports Medicine, 2016, 37, 374-381. | 1.7 | 7 |
| 78 | Thermal compensation technique using the parasitic diode for DMOS transistors. Sensors and Actuators A: Physical, 2016, 249, 249-255. | 4.1 | 6 |
| 79 | Plantar Pressure Changes and Their Relationships with Low Back Pain during Pregnancy Using Instrumented Insoles. Journal of Sensors, 2019, 2019, 1-10. | 1.1 | 6 |
| 80 | The effect of bending on laser-cut electro-textile inductors and capacitors attached on denim as wearable structures. Textile Reseach Journal, 2020, 90, 2355-2366. | 2.2 | 6 |
| 81 | Development and Evaluation of a Low-Drift Inertial Sensor-Based System for Analysis of Alpine Skiing Performance. Sensors, 2021, 21, 2480. | 3.8 | 6 |
| 82 | Influence of the position of deep levels on generationâ€recombination noise. Applied Physics Letters, 1995, 67, 3581-3583. | 3.3 | 5 |
| 83 | Influence of technological parameters on the behavior of the hole effective mass in SiGe structures. Journal of Applied Physics, 2000, 88, 1978-1982. | 2.5 | 5 |
| 84 | Study of the subthreshold swing of a pMOSFET as a dosimetric parameter. Sensors and Actuators A: Physical, 2012, 187, 16-21. | 4.1 | 4 |
| 85 | A simplified thermal model for lateral MOSFET and its application to temperature monitoring. Semiconductor Science and Technology, 2014, 29, 095017. | 2.0 | 4 |
| 86 | A simple model for analysing the effects of band non-parabolicity in nanostructures. Semiconductor Science and Technology, 2005, 20, 532-539. | 2.0 | 3 |
| 87 | Cantilever Fabrication by a Printing and Bonding Process. Journal of Microelectromechanical Systems, 2015, 24, 880-886. | 2.5 | 3 |
| 88 | Computer Vision-Based Portable System for Nitroaromatics Discrimination. Journal of Sensors, 2016, 2016, 1-10. | 1.1 | 3 |
| 89 | Hybrid printed device for simultaneous vapours sensing. IEEE Sensors Journal, 2016, , 1-1. | 4.7 | 3 |
| 90 | Development of a printed sensor for volatile organic compound detection at Î¼g/L-level. Sensors and Actuators B: Chemical, 2016, 230, 115-122. | 7.8 | 3 |

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|---|---|---|---|
| 91 | Commercial photodiodes and phototransistors as dosimeters of photon beams for radiotherapy. Medical Physics, 2021, 48, 5440-5447. | 3.0 | 3 |
| 92 | Comprehensive Monte Carlo simulation of the nonradiative carrier capture process by impurities in semiconductors. Journal of Applied Physics, 1995, 77, 1998-2005. | 2.5 | 2 |
| 93 | Modeling of radiation effects in MOSFETs. , 2013, , . | | 2 |
| 94 | Comparative study of printed capacitive sensors. , 2015, , . | | 2 |
| 95 | Radiation sensitive MOSFETs irradiated with various positive gate biases. Journal of Radiation Research and Applied Sciences, 2021, 14, 353-357. | 1.2 | 2 |
| 96 | Digital Optical Ballistocardiographic System for Activity, Heart Rate, and Breath Rate Determination during Sleep. Sensors, 2022, 22, 4112. | 3.8 | 2 |
| 97 | Monte Carlo simulation of multiphonon capture mechanism by deep neutral impurities in Si in the presence of an electric field. Journal of Applied Physics, 1995, 78, 5448-5453. | 2.5 | 1 |
| 98 | Optimum design in a JFET for minimum generationâ€“recombination noise. Microelectronics Reliability, 2000, 40, 1965-1968. | 1.7 | 1 |
| 99 | A preliminary study of the relation between back-pain and plantar-pressure evolution during pregnancy. , 2015, 2015, 1235-8. | | 1 |
| 100 | Parametrized ECT processing over FPGA for a reconfigurable application. , 2015, , . | | 1 |
| 101 | Acute Effects of Muscular Fatigue on Vertical Jump Performance in Acrobatic Gymnasts, Evaluated by Instrumented Insoles: A Pilot Study. Journal of Sensors, 2021, 2021, 1-6. | 1.1 | 1 |
| 102 | Commercial P-Channel Power VDMOSFET as X-ray Dosimeter. Electronics (Switzerland), 2022, 11, 918. | 3.1 | 1 |
| 103 | A design concept for radiation hardened RADFET readout system for space applications. Microprocessors and Microsystems, 2022, 90, 104486. | 2.8 | 1 |
| 104 | Subthreshold response of a MOSFET to radiation effects. , 2013, , . | | 0 |
| 105 | RADFET response to photon and electron beams. , 2015, , . | | 0 |
| 106 | Coupling Sensing and Imaging Devices: Towards a Complete Handheld Analytical System. Proceedings (mdpi), 2017, 1, 854. | 0.2 | 0 |