

Irma ChacÃ³n

List of Publications by Year in descending order

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Version: 2024-02-01

81
papers

5,726
citations

76294

40
h-index

85498

71
g-index

83
all docs

83
docs citations

83
times ranked

6358
citing authors

| # | ARTICLE | IF | CITATIONS |
|----|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------|-----------|
| 1 | Microfluidic 3D cell culture: potential application for tissue-based bioassays. <i>Bioanalysis</i> , 2012, 4, 1509-1525. | 0.6 | 268 |
| 2 | A PDMS/paper/glass hybrid microfluidic biochip integrated with aptamer-functionalized graphene oxide nano-biosensors for one-step multiplexed pathogen detection. <i>Lab on A Chip</i> , 2013, 13, 3921. | 3.1 | 258 |
| 3 | Efficient NH ₃ -SCR removal of NO _x with highly ordered mesoporous WO ₃ (I ₂)-CeO ₂ at low temperatures. <i>Applied Catalysis B: Environmental</i> , 2017, 203, 199-209. | 10.8 | 249 |
| 4 | An integrated paper-based sample-to-answer biosensor for nucleic acid testing at the point of care. <i>Lab on A Chip</i> , 2016, 16, 611-621. | 3.1 | 247 |
| 5 | Recent advances of controlled drug delivery using microfluidic platforms. <i>Advanced Drug Delivery Reviews</i> , 2018, 128, 3-28. | 6.6 | 241 |
| 6 | Paper-based piezoresistive MEMS sensors. <i>Lab on A Chip</i> , 2011, 11, 2189. | 3.1 | 212 |
| 7 | Biomarker detection for disease diagnosis using cost-effective microfluidic platforms. <i>Analyst</i> , The, 2015, 140, 7062-7081. | 1.7 | 208 |
| 8 | Bioactuators based on stimulus-responsive hydrogels and their emerging biomedical applications. <i>NPG Asia Materials</i> , 2019, 11, . | 3.8 | 202 |
| 9 | Exploration of Nanoparticle-Mediated Photothermal Effect of TMB-H ₂ O ₂ Colorimetric System and Its Application in a Visual Quantitative Photothermal Immunoassay. <i>Analytical Chemistry</i> , 2018, 90, 5930-5937. | 3.2 | 201 |
| 10 | A Versatile PDMS/Paper Hybrid Microfluidic Platform for Sensitive Infectious Disease Diagnosis. <i>Analytical Chemistry</i> , 2014, 86, 7978-7986. | 3.2 | 181 |
| 11 | Advances in Smartphone-Based Point-of-Care Diagnostics. <i>Proceedings of the IEEE</i> , 2015, 103, 236-247. | 16.4 | 169 |
| 12 | Aptamer-functionalized metal-organic frameworks (MOFs) for biosensing. <i>Biosensors and Bioelectronics</i> , 2021, 176, 112947. | 5.3 | 161 |
| 13 | Integrated DNA purification, PCR, sample cleanup, and capillary electrophoresis microchip for forensic human identification. <i>Lab on A Chip</i> , 2011, 11, 1041. | 3.1 | 157 |
| 14 | Gold Nanoparticle Aggregation-Induced Quantitative Photothermal Biosensing Using a Thermometer: A Simple and Universal Biosensing Platform. <i>Analytical Chemistry</i> , 2020, 92, 2739-2747. | 3.2 | 126 |
| 15 | Nanoparticle-mediated photothermal effect enables a new method for quantitative biochemical analysis using a thermometer. <i>Nanoscale</i> , 2016, 8, 5422-5427. | 2.8 | 123 |
| 16 | Low-cost bioanalysis on paper-based and its hybrid microfluidic platforms. <i>Talanta</i> , 2015, 145, 43-54. | 2.9 | 121 |
| 17 | Recent advances in microfluidic platforms for single-cell analysis in cancer biology, diagnosis and therapy. <i>TrAC - Trends in Analytical Chemistry</i> , 2019, 117, 13-26. | 5.8 | 121 |
| 18 | A paper/polymer hybrid microfluidic microplate for rapid quantitative detection of multiple disease biomarkers. <i>Scientific Reports</i> , 2016, 6, 30474. | 1.6 | 110 |

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|----|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|-----------|
| 19 | Multiplexed instrument-free meningitis diagnosis on a polymer/paper hybrid microfluidic biochip. <i>Biosensors and Bioelectronics</i> , 2017, 87, 865-873. | 5.3 | 110 |
| 20 | A portable and universal upconversion nanoparticle-based lateral flow assay platform for point-of-care testing. <i>Talanta</i> , 2019, 201, 126-133. | 2.9 | 104 |
| 21 | A low-cost nanomaterial-based electrochemical immunosensor on paper for high-sensitivity early detection of pancreatic cancer. <i>Sensors and Actuators B: Chemical</i> , 2020, 305, 127516. | 4.0 | 103 |
| 22 | Multiplexed Instrument-Free Bar-Chart SpinChip Integrated with Nanoparticle-Mediated Magnetic Aptasensors for Visual Quantitative Detection of Multiple Pathogens. <i>Analytical Chemistry</i> , 2018, 90, 9888-9896. | 3.2 | 101 |
| 23 | Stem cell culture and differentiation in microfluidic devices toward organ-on-a-chip. <i>Future Science OA</i> , 2017, 3, FSO187. | 0.9 | 97 |
| 24 | Microfluidic Selection and Retention of a Single Cardiac Myocyte, On-Chip Dye Loading, Cell Contraction by Chemical Stimulation, and Quantitative Fluorescent Analysis of Intracellular Calcium. <i>Analytical Chemistry</i> , 2005, 77, 4315-4322. | 3.2 | 78 |
| 25 | A simple and fast microfluidic approach of same-single-cell analysis (SASCA) for the study of multidrug resistance modulation in cancer cells. <i>Lab on A Chip</i> , 2011, 11, 1378. | 3.1 | 75 |
| 26 | Atomically Precise Au ₂₅ (SG) ₁₈ Nanoclusters: Rapid Single-Step Synthesis and Application in Photothermal Therapy. <i>ACS Applied Materials & Interfaces</i> , 2018, 10, 75-82. | 4.0 | 75 |
| 27 | Improved Analytical Sensitivity of Lateral Flow Assay using Sponge for HBV Nucleic Acid Detection. <i>Scientific Reports</i> , 2017, 7, 1360. | 1.6 | 73 |
| 28 | Same-Single-Cell Analysis for the Study of Drug Efflux Modulation of Multidrug Resistant Cells Using a Microfluidic Chip. <i>Analytical Chemistry</i> , 2008, 80, 4095-4102. | 3.2 | 72 |
| 29 | Study of flow behaviors on single-cell manipulation and shear stress reduction in microfluidic chips using computational fluid dynamics simulations. <i>Biomicrofluidics</i> , 2014, 8, 014109. | 1.2 | 70 |
| 30 | Simultaneous Determination of Tryptophan and Glutathione in Individual Rat Hepatocytes by Capillary Zone Electrophoresis with Electrochemical Detection at a Carbon Fiber Bundle Au/Hg Dual Electrode. <i>Analytical Chemistry</i> , 2003, 75, 3859-3864. | 3.2 | 64 |
| 31 | A paper/polymer hybrid CD-like microfluidic SpinChip integrated with DNA-functionalized graphene oxide nanosensors for multiplex qLAMP detection. <i>Chemical Communications</i> , 2017, 53, 10886-10889. | 2.2 | 64 |
| 32 | Recent innovations in cost-effective polymer and paper hybrid microfluidic devices. <i>Lab on A Chip</i> , 2021, 21, 2658-2683. | 3.1 | 62 |
| 33 | Preparation and evaluation of Bletilla striata polysaccharide/graphene oxide composite hemostatic sponge. <i>International Journal of Biological Macromolecules</i> , 2019, 130, 827-835. | 3.6 | 55 |
| 34 | Low-Cost Quantitative Photothermal Genetic Detection of Pathogens on a Paper Hybrid Device Using a Thermometer. <i>Analytical Chemistry</i> , 2020, 92, 14830-14837. | 3.2 | 53 |
| 35 | Rapid and Accurate Diagnosis of the Respiratory Disease Pertussis on a Point-of-Care Biochip. <i>EClinicalMedicine</i> , 2019, 8, 72-77. | 3.2 | 51 |
| 36 | Real-time monitoring of intracellular calcium dynamic mobilization of a single cardiomyocyte in a microfluidic chip pertaining to drug discovery. <i>Electrophoresis</i> , 2007, 28, 4723-4733. | 1.3 | 49 |

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|----|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|-----------|
| 37 | Cost-effective and sensitive colorimetric immunosensing using an iron oxide-to-Prussian blue nanoparticle conversion strategy. <i>Analyst</i> , The, 2016, 141, 3883-3889. | 1.7 | 48 |
| 38 | Interfacial nano-biosensing in microfluidic droplets for high-sensitivity detection of low-solubility molecules. <i>Chemical Communications</i> , 2016, 52, 3470-3473. | 2.2 | 47 |
| 39 | Paper-based device with on-chip reagent storage for rapid extraction of DNA from biological samples. <i>Mikrochimica Acta</i> , 2017, 184, 2141-2150. | 2.5 | 45 |
| 40 | EsxA membrane-permeabilizing activity plays a key role in mycobacterial cytosolic translocation and virulence: effects of single-residue mutations at glutamine 5. <i>Scientific Reports</i> , 2016, 6, 32618. | 1.6 | 44 |
| 41 | Photothermal Microfluidic Sensing Platform Using Near-Infrared Laser-Driven Multiplexed Dual-Mode Visual Quantitative Readout. <i>Analytical Chemistry</i> , 2019, 91, 13290-13296. | 3.2 | 43 |
| 42 | Capillary blood for point-of-care testing. <i>Critical Reviews in Clinical Laboratory Sciences</i> , 2017, 54, 294-308. | 2.7 | 39 |
| 43 | A low-cost microfluidic platform for rapid and instrument-free detection of whooping cough. <i>Analytica Chimica Acta</i> , 2019, 1065, 71-78. | 2.6 | 39 |
| 44 | Detector-Free Photothermal Bar-Chart Microfluidic Chips (PT-Chips) for Visual Quantitative Detection of Biomarkers. <i>Analytical Chemistry</i> , 2021, 93, 7754-7762. | 3.2 | 39 |
| 45 | Controlled Drug Delivery Using Microdevices. <i>Current Pharmaceutical Biotechnology</i> , 2016, 17, 772-787. | 0.9 | 39 |
| 46 | Novel TiO ₂ catalyst carriers with high thermostability for selective catalytic reduction of NO by NH ₃ . <i>Catalysis Today</i> , 2019, 327, 279-287. | 2.2 | 38 |
| 47 | A reusable PMMA/paper hybrid plug-and-play microfluidic device for an ultrasensitive immunoassay with a wide dynamic range. <i>Microsystems and Nanoengineering</i> , 2020, 6, 28. | 3.4 | 38 |
| 48 | Microfluidic devices for biomedical applications. , 2013, , . | | 35 |
| 49 | Separation and determination of homovanillic acid and vanillylmandelic acid by capillary electrophoresis with electrochemical detection. <i>Analytica Chimica Acta</i> , 2002, 461, 123-130. | 2.6 | 34 |
| 50 | Real-time detection of the early event of cytotoxicity of herbal ingredients on single leukemia cells studied in a microfluidic biochip. <i>Integrative Biology (United Kingdom)</i> , 2009, 1, 90-98. | 0.6 | 33 |
| 51 | Study of flow behaviors of droplet merging and splitting in microchannels using Micro-PIV measurement. <i>Microfluidics and Nanofluidics</i> , 2017, 21, 1. | 1.0 | 33 |
| 52 | Remotely tunable microfluidic platform driven by nanomaterial-mediated on-demand photothermal pumping. <i>Lab on A Chip</i> , 2020, 20, 2218-2227. | 3.1 | 33 |
| 53 | One-Step Surface Modification to Graft DNA Codes on Paper: The Method, Mechanism, and Its Application. <i>Analytical Chemistry</i> , 2020, 92, 7045-7053. | 3.2 | 31 |
| 54 | Immunotherapy discovery on tumor organoid-on-a-chip platforms that recapitulate the tumor microenvironment. <i>Advanced Drug Delivery Reviews</i> , 2022, 187, 114365. | 6.6 | 30 |

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|----|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|-----------|
| 55 | A new method to amplify colorimetric signals of paper-based nanobiosensors for simple and sensitive pancreatic cancer biomarker detection. <i>Analyst, The</i> , 2020, 145, 5113-5117. | 1.7 | 29 |
| 56 | A rotating microfluidic array chip for staining assays. <i>Talanta</i> , 2010, 81, 1203-1208. | 2.9 | 25 |
| 57 | Smart paper transformer: new insight for enhanced catalytic efficiency and reusability of noble metal nanocatalysts. <i>Chemical Science</i> , 2020, 11, 2915-2925. | 3.7 | 25 |
| 58 | In vitrosatially organizing the differentiation in individual multicellular stem cell aggregates. <i>Critical Reviews in Biotechnology</i> , 2016, 36, 20-31. | 5.1 | 24 |
| 59 | A smartphone-based on-site nucleic acid testing platform at point-of-care settings. <i>Electrophoresis</i> , 2019, 40, 914-921. | 1.3 | 24 |
| 60 | A fully battery-powered inexpensive spectrophotometric system for high-sensitivity point-of-care analysis on a microfluidic chip. <i>Analyst, The</i> , 2016, 141, 3898-3903. | 1.7 | 20 |
| 61 | Multiplexed tri-mode visual outputs of immunoassay signals on a clip-magazine-assembled photothermal biosensing disk. <i>Biosensors and Bioelectronics</i> , 2020, 170, 112646. | 5.3 | 19 |
| 62 | Spatiotemporally Controlled Multiplexed Photothermal Microfluidic Pumping under Monitoring of On-Chip Thermal Imaging. <i>ACS Sensors</i> , 2019, 4, 2481-2490. | 4.0 | 18 |
| 63 | Integration and Quantitative Visualization of 3,3',5,5'-Tetramethylbenzidine-Probed Enzyme-Linked Immunosorbent Assay-like Signals in a Photothermal Bar-Chart Microfluidic Chip for Multiplexed Immunosensing. <i>Analytical Chemistry</i> , 2021, 93, 15105-15114. | 3.2 | 18 |
| 64 | Strong interaction between Au nanoparticles and porous polyurethane sponge enables efficient environmental catalysis with high reusability. <i>Catalysis Today</i> , 2020, 358, 246-253. | 2.2 | 17 |
| 65 | Novel porous ceramic sheet supported metal reactors for continuous-flow catalysis. <i>Catalysis Today</i> , 2020, 358, 324-332. | 2.2 | 13 |
| 66 | Multicolorimetric ELISA biosensors on a paper/polymer hybrid analytical device for visual point-of-care detection of infection diseases. <i>Analytical and Bioanalytical Chemistry</i> , 2021, 413, 4655-4663. | 1.9 | 13 |
| 67 | <i>Mycobacterium marinum</i> down-regulates miR-148a in macrophages in an EsxA-dependent manner. <i>International Immunopharmacology</i> , 2019, 73, 41-48. | 1.7 | 12 |
| 68 | AuNP aggregation-induced quantitative colorimetric aptasensing of sulfadimethoxine with a smartphone. <i>Chinese Chemical Letters</i> , 2022, 33, 3078-3082. | 4.8 | 12 |
| 69 | Strategies for the real-time detection of Ca ²⁺ channel events of single cells: recent advances and new possibilities. <i>Expert Review of Clinical Pharmacology</i> , 2010, 3, 267-280. | 1.3 | 10 |
| 70 | Contraction Study of a Single Cardiac Muscle Cell in a Microfluidic Chip. , 2006, 321, 199-226. | | 9 |
| 71 | Resource utilization of waste deNO _x catalyst for continuous-flow catalysis by supported metal reactors. <i>Molecular Catalysis</i> , 2020, 480, 110634. | 1.0 | 7 |
| 72 | Editorial (Thematic Issue: Special Issue for Current Pharmaceutical Biotechnology Miniaturized) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 50 67 753-754. | 0.9 | 4 |

| # | ARTICLE | IF | CITATIONS |
|----|---------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|-----------|
| 73 | Analytical chemistry for infectious disease detection and prevention. Analytical and Bioanalytical Chemistry, 2021, 413, 4561-4562. | 1.9 | 4 |
| 74 | Rapid disease diagnosis using low-cost paper and paper-hybrid microfluidic devices. , 2022, , 325-360. | | 4 |
| 75 | Microfluidic Lab-on-a-Chip. , 2004, , 581-679. | | 3 |
| 76 | On-Demand Photothermal Bar-Chart Microfluidic Platform Using On-Chip Nanomaterial-Mediated Photothermal Effect as the Microfluidic Driving Force. , 2020, , . | | 1 |
| 77 | Controlled drug delivery using microdevices. , 2021, , 205-223. | | 1 |
| 78 | Microfluidic devices for cell manipulation. , 2021, , 329-389. | | 1 |
| 79 | Microfluidic devices for stem cell analysis. , 2021, , 437-487. | | 0 |
| 80 | Paper-based microfluidic devices for low-cost assays. , 2021, , 551-585. | | 0 |
| 81 | Two-photon flow cytometry with laser scanning two-dimensional airy beams. Optics Communications, 2022, 508, 127804. | 1.0 | 0 |