

# Benoît Piro

## List of Publications by Year in descending order

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Version: 2024-02-01

69  
papers

3,067  
citations

159585

30  
h-index

161849

54  
g-index

69  
all docs

69  
docs citations

69  
times ranked

4171  
citing authors

| #  | ARTICLE   | IF   | CITATIONS |
|----|---|------|-----------|
| 1  | Electronic devices for biomarker monitoring. , 2022, , 183-207.   |      | 0         |
| 2  | Challenges, Prospects, and Emerging Applications of Inkjet-Printed Electronics: A Chemist's Point of View. <i>Angewandte Chemie - International Edition</i> , 2022, 61, .                       | 13.8 | 35        |
| 3  | In vivo electrochemically-assisted polymerization of conjugated functionalized terthiophenes inside the vascular system of a plant. <i>Electrochemistry Communications</i> , 2022, 137, 107270. | 4.7  | 5         |
| 4  | A simple flexible printed capacitive pressure sensor for chronic wound monitoring. <i>Sensors and Actuators A: Physical</i> , 2022, 338, 113490.  | 4.1  | 10        |
| 5  | Novel nanoscale Yb-MOF used as highly efficient electrode for simultaneous detection of heavy metal ions. <i>Journal of Materials Science</i> , 2021, 56, 8172-8185.                            | 3.7  | 32        |
| 6  | Gold nanoparticle-based eco-friendly ink for electrode patterning on flexible substrates. <i>Electrochemistry Communications</i> , 2021, 123, 106918.   | 4.7  | 13        |
| 7  | Recent trends in application of nanomaterials for the development of electrochemical microRNA biosensors. <i>Mikrochimica Acta</i> , 2021, 188, 128.  | 5.0  | 22        |
| 8  | Electrochemical tuning of reduced graphene oxide in printed electrolyte-gated transistors. Impact on charge transport properties. <i>Electrochimica Acta</i> , 2021, 371, 137819.               | 5.2  | 13        |
| 9  | Algae-functionalized hydrogel-gated organic field-effect transistor. Application to the detection of herbicides. <i>Electrochimica Acta</i> , 2021, 372, 137881.                                | 5.2  | 7         |
| 10 | Nernst-Planck-Poisson analysis of electrolyte-gated organic field-effect transistors. <i>Journal Physics D: Applied Physics</i> , 2021, 54, 415101.   | 2.8  | 9         |
| 11 | Computational Studies of a DNA-Based Aptasensor: toward Theory-Driven Transduction Improvement. <i>Journal of Physical Chemistry B</i> , 2021, 125, 9499-9506.                                  | 2.6  | 3         |
| 12 | Designing a magnetic inductive micro-electrode for virus monitoring: modelling and feasibility for hepatitis B virus. <i>Mikrochimica Acta</i> , 2020, 187, 463.                                | 5.0  | 6         |
| 13 | Sensors Made of Natural Renewable Materials: Efficiency, Recyclability or Biodegradability? The Green Electronics. <i>Sensors</i> , 2020, 20, 5898.   | 3.8  | 21        |
| 14 | All-Inkjet-Printed Humidity Sensors for the Detection of Relative Humidity in Air and Soil? Towards the Direct Fabrication on Plant Leaves. <i>MRS Advances</i> , 2020, 5, 965-973.             | 0.9  | 7         |
| 15 | Monitoring photosynthetic microorganism activity with an electrolyte-gated organic field effect transistor. <i>Biosensors and Bioelectronics</i> , 2020, 157, 112166.                           | 10.1 | 12        |
| 16 | Driving Electrolyte-Gated Organic Field-Effect Transistors with Redox Reactions. , 2020, 60, .  |      | 0         |
| 17 | Recent Advances in Skin Chemical Sensors. <i>Sensors</i> , 2019, 19, 4376.  | 3.8  | 26        |
| 18 | Silver nanoparticles on graphene quantum dots as nanozyme for efficient $H_2O_2$ reduction in a glucose biosensor. <i>Materials Research Express</i> , 2019, 6, 115403.                         | 1.6  | 17        |

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|----|---|------|-----------|
| 19 | A DNA hydrogel gated organic field effect transistor. <i>Organic Electronics</i> , 2019, 75, 105402.  | 2.6  | 15        |
| 20 | Peptide-modified electrolyte-gated organic field effect transistor. Application to Cu <sup>2+</sup> detection. <i>Biosensors and Bioelectronics</i> , 2019, 127, 118-125.   | 10.1 | 36        |
| 21 | Electrolyte-gated organic field-effect transistors (EGOFETs) as complementary tools to electrochemistry for the study of surface processes. <i>Electrochemistry Communications</i> , 2019, 98, 43-46.   | 4.7  | 16        |
| 22 | Ionic Liquids as Environmentally Benign Electrolytes for High-Performance Supercapacitors. <i>Global Challenges</i> , 2019, 3, 1800023.   | 3.6  | 50        |
| 23 | In-situ electrochemically deposited Fe <sub>3</sub> O <sub>4</sub> nanoparticles onto graphene nanosheets as amperometric amplifier for electrochemical biosensing applications. <i>Sensors and Actuators B: Chemical</i> , 2019, 283, 52-60.                             | 7.8  | 31        |
| 24 | Sensitive and Selective Detection of Multiple Metal Ions Using Amino Acids Modified Glassy Carbon Electrodes. <i>Journal of the Electrochemical Society</i> , 2018, 165, B67-B73.   | 2.9  | 18        |
| 25 | Triggering the Electrolyte-Gated Organic Field-Effect Transistor output characteristics through gate functionalization using diazonium chemistry: Application to biodetection of 2,4-dichlorophenoxyacetic acid. <i>Biosensors and Bioelectronics</i> , 2018, 113, 32-38. | 10.1 | 33        |
| 26 | Electrochemical determination of tetracycline using AuNP-coated molecularly imprinted overoxidized polypyrrole sensing interface. <i>Electrochimica Acta</i> , 2018, 270, 535-542.  | 5.2  | 107       |
| 27 | Switchable Hydrogel-Gated Organic Field-Effect Transistors. <i>Langmuir</i> , 2018, 34, 3686-3693.  | 3.5  | 30        |
| 28 | Cyclic voltammetry, square wave voltammetry, electrochemical impedance spectroscopy and colorimetric method for hydrogen peroxide detection based on chitosan/silver nanocomposite. <i>Arabian Journal of Chemistry</i> , 2018, 11, 453-459.                              | 4.9  | 33        |
| 29 | Development of a Selective Electrochemical Sensing Platform for the Simultaneous Detection of Tl <sup>+</sup> , Cu <sup>2+</sup> , Hg <sup>2+</sup> , and Zn <sup>2+</sup> Ions. <i>Journal of the Electrochemical Society</i> , 2018, 165, B399-B406.                    | 2.9  | 15        |
| 30 | Fabrication and Use of Organic Electrochemical Transistors for Sensing of Metabolites in Aqueous Media. <i>Applied Sciences (Switzerland)</i> , 2018, 8, 928.   | 2.5  | 29        |
| 31 | Transistors for Chemical Monitoring of Living Cells. <i>Biosensors</i> , 2018, 8, 65.   | 4.7  | 13        |
| 32 | Versatile transduction scheme based on electrolyte-gated organic field-effect transistor used as immunoassay readout system. <i>Biosensors and Bioelectronics</i> , 2017, 92, 215-220.  | 10.1 | 27        |
| 33 | Fabrication of a quinone containing layer on gold nanoparticles directed to a label-free and reagentless electrochemical miRNA sensor. <i>Analytical Methods</i> , 2017, 9, 2696-2702.  | 2.7  | 14        |
| 34 | Enzyme-less electrochemical displacement heterogeneous immunosensor for diclofenac detection. <i>Biosensors and Bioelectronics</i> , 2017, 97, 246-252.   | 10.1 | 27        |
| 35 | Molecular Dynamics Simulation of a RNA Aptasensor. <i>Journal of Physical Chemistry B</i> , 2017, 121, 4071-4080.   | 2.6  | 34        |
| 36 | Inkjet-Printing: A New Fabrication Technology for Organic Transistors. <i>Advanced Materials Technologies</i> , 2017, 2, 1700063.   | 5.8  | 106       |

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|----|--|------|-----------|
| 37 | Recent Advances in Electrochemical Immunosensors. <i>Sensors</i> , 2017, 17, 794.  | 3.8  | 69        |
| 38 | Comparison of Electrochemical Immunosensors and Aptasensors for Detection of Small Organic Molecules in Environment, Food Safety, Clinical and Public Security. <i>Biosensors</i> , 2016, 6, 7.                      | 4.7  | 45        |
| 39 | Electrolytic Gated Organic Field-Effect Transistors for Application in Biosensors – A Review. <i>Electronics (Switzerland)</i> , 2016, 5, 9.   | 3.1  | 119       |
| 40 | One-Step Electrosynthesis of Poly(1,5-diaminonaphthalene)/Graphene Nanocomposite as Platform for Lead Detection in Water. <i>Electroanalysis</i> , 2016, 28, 1907-1913.  | 2.9  | 22        |
| 41 | Grafting of a peptide probe for Prostate-Specific Antigen detection using diazonium electroreduction and click chemistry. <i>Biosensors and Bioelectronics</i> , 2016, 81, 131-137.                                  | 10.1 | 33        |
| 42 | Nanodomains of Juglonethiol on Au(111): Relationship between Domain Size and Electrochemical Properties. <i>Journal of Physical Chemistry C</i> , 2015, 119, 29015-29026.  | 3.1  | 4         |
| 43 | Label-free electrochemical detection of prostate-specific antigen based on nucleic acid aptamer. <i>Biosensors and Bioelectronics</i> , 2015, 68, 49-54.   | 10.1 | 76        |
| 44 | General approach for electrochemical detection of persistent pharmaceutical micropollutants: Application to acetaminophen. <i>Biosensors and Bioelectronics</i> , 2015, 72, 205-210.                                 | 10.1 | 20        |
| 45 | Modified Electrodes Used for Electrochemical Detection of Metal Ions in Environmental Analysis. <i>Biosensors</i> , 2015, 5, 241-275.  | 4.7  | 264       |
| 46 | DNA and PNA Probes for DNA Detection in Electroanalytical Systems. <i>RNA Technologies</i> , 2015, , 47-80.  | 0.3  | 2         |
| 47 | Electrocatalytic miRNA Detection Using Cobalt Porphyrin-Modified Reduced Graphene Oxide. <i>Sensors</i> , 2014, 14, 9984-9994.   | 3.8  | 11        |
| 48 | An innovative strategy for direct electrochemical detection of microRNA biomarkers. <i>Analytical and Bioanalytical Chemistry</i> , 2014, 406, 1241-1244.  | 3.7  | 17        |
| 49 | Simultaneous Electroreduction of Different Diazonium Salts for Direct Electrochemical DNA Biosensor Development. <i>Electrochimica Acta</i> , 2014, 140, 49-58.  | 5.2  | 19        |
| 50 | E-assay concept: Detection of bisphenol A with a label-free electrochemical competitive immunoassay. <i>Biosensors and Bioelectronics</i> , 2014, 53, 214-219.   | 10.1 | 47        |
| 51 | Detection of Glutamate and Acetylcholine with Organic Electrochemical Transistors Based on Conducting Polymer/Platinum Nanoparticle Composites. <i>Advanced Materials</i> , 2014, 26, 5658-5664.                     | 21.0 | 142       |
| 52 | On the mode of operation in electrolyte-gated thin film transistors based on different substituted polythiophenes. <i>Organic Electronics</i> , 2014, 15, 2420-2427.   | 2.6  | 52        |
| 53 | Direct, reagentless electrochemical detection of the BIR3 domain of X-linked inhibitor of apoptosis protein using a peptide-based conducting polymer sensor. <i>Biosensors and Bioelectronics</i> , 2014, 61, 57-62. | 10.1 | 18        |
| 54 | Label-Free Electrochemical Immunoaffinity Sensor Based on Impedimetric Method for Pesticide Detection. <i>Electroanalysis</i> , 2013, 25, 664-670.   | 2.9  | 14        |

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|----|--|------|-----------|
| 55 | Copolythiophene-based water-gated organic field-effect transistors for biosensing. <i>Journal of Materials Chemistry B</i> , 2013, 1, 2090.  | 5.8  | 41        |
| 56 | Tuning the threshold voltage in electrolyte-gated organic field-effect transistors. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2012, 109, 8394-8399.                     | 7.1  | 94        |
| 57 | Electrochemical investigation of interactions between quinone derivatives and single stranded DNA. <i>Electrochimica Acta</i> , 2012, 85, 588-593.   | 5.2  | 9         |
| 58 | DNA detection with a water-gated organic field-effect transistor. <i>Organic Electronics</i> , 2012, 13, 1-6.  | 2.6  | 127       |
| 59 | Advances in organic transistor-based biosensors: from organic electrochemical transistors to electrolyte-gated organic field-effect transistors. <i>Analytical and Bioanalytical Chemistry</i> , 2012, 402, 1813-1826. | 3.7  | 247       |
| 60 | Functionalization of single-walled carbon nanotubes for direct and selective electrochemical detection of DNA. <i>Analyst</i> , 2011, 136, 1023-1028.  | 3.5  | 29        |
| 61 | Use of poly(3-hexylthiophene)/poly(methyl methacrylate) (P3HT/PMMA) blends to improve the performance of water-gated organic field-effect transistors. <i>Organic Electronics</i> , 2011, 12, 1253-1257.               | 2.6  | 56        |
| 62 | A Water-Gate Organic Field-Effect Transistor. <i>Advanced Materials</i> , 2010, 22, 2565-2569.   | 21.0 | 265       |
| 63 | Hydroxynaphthoquinone Ultrathin Films Obtained by Diazonium Electroreduction: Toward Design of Biosensitive Electroactive Interfaces. <i>Analytical Chemistry</i> , 2010, 82, 3523-3530.                               | 6.5  | 29        |
| 64 | Nanometric Layers for Direct, Signal-On, Selective, and Sensitive Electrochemical Detection of Oligonucleotides Hybridization. <i>Journal of the American Chemical Society</i> , 2008, 130, 15752-15753.               | 13.7 | 52        |
| 65 | DNA Electrochemical Sensor Based on Conducting Polymer: Dependence of the "Signal-On" Detection on the Probe Sequence Localization. <i>Analytical Chemistry</i> , 2005, 77, 3351-3356.                                 | 6.5  | 51        |
| 66 | Electroactive Poly(aromatic amine) Films for Iron Protection in Sulfate Medium. <i>Journal of the Electrochemical Society</i> , 2001, 148, B121.   | 2.9  | 64        |
| 67 | Poly(5-amino-1,4-naphthoquinone), a Novel Lithium-Inserting Electroactive Polymer with High Specific Charge. <i>Journal of the Electrochemical Society</i> , 1999, 146, 2393-2396.                                     | 2.9  | 75        |
| 68 | Anodic oxidation of 5-amino-1,4-naphthoquinone (ANQ) and synthesis of a conducting polymer (PANQ). <i>Synthetic Metals</i> , 1998, 92, 197-205.  | 3.9  | 80        |
| 69 | Challenges, Prospects, and Emerging Applications of Inkjet-Printed Electronics: A Chemist's Point of View. <i>Angewandte Chemie</i> , 0, , .   | 2.0  | 2         |