Gaston A Crespo

List of Publications by Year in descending order

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99	4,854	87888	102487
papers	citations	38 h-index	66 g-index

101	101	101	3747
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Ion-Selective Electrodes Using Carbon Nanotubes as Ion-to-Electron Transducers. Analytical Chemistry, 2008, 80, 1316-1322.	6.5	365
2	Transduction Mechanism of Carbon Nanotubes in Solid-Contact Ion-Selective Electrodes. Analytical Chemistry, 2009, 81, 676-681.	6.5	211
3	Wearable potentiometric ion sensors. TrAC - Trends in Analytical Chemistry, 2019, 110, 303-320.	11.4	211
4	Paper-Based Ion-Selective Potentiometric Sensors. Analytical Chemistry, 2012, 84, 4695-4702.	6.5	189
5	Potentiometric sensors using cotton yarns, carbon nanotubes and polymeric membranes. Analyst, The, 2013, 138, 5208.	3.5	182
6	Photocurrent generation based on a light-driven proton pump in an artificial liquid membrane. Nature Chemistry, 2014, 6, 202-207.	13.6	153
7	All-Solid-State Potentiometric Sensors with a Multiwalled Carbon Nanotube Inner Transducing Layer for Anion Detection in Environmental Samples. Analytical Chemistry, 2015, 87, 8640-8645.	6.5	130
8	Recent Advances in Ion-selective membrane electrodes for in situ environmental water analysis. Electrochimica Acta, 2017, 245, 1023-1034.	5.2	126
9	Wearable All-Solid-State Potentiometric Microneedle Patch for Intradermal Potassium Detection. Analytical Chemistry, 2019, 91, 1578-1586.	6.5	116
10	Epidermal Patch with Glucose Biosensor: pH and Temperature Correction toward More Accurate Sweat Analysis during Sport Practice. Analytical Chemistry, 2020, 92, 10153-10161.	6.5	116
11	A reference electrode based on polyvinyl butyral (PVB) polymer for decentralized chemical measurements. Analytica Chimica Acta, 2014, 821, 72-80.	5.4	114
12	Efficient BiVO₄ Photoanodes by Postsynthetic Treatment: Remarkable Improvements in Photoelectrochemical Performance from Facile Borate Modification. Angewandte Chemie - International Edition, 2019, 58, 19027-19033.	13.8	108
13	All-solid-state potentiometric sensors: A new wave for in situ aquatic research. Current Opinion in Electrochemistry, 2018, 10, 98-106.	4.8	101
14	Wearable Potentiometric Sensors for Medical Applications. Sensors, 2019, 19, 363.	3.8	100
15	Lactate Biosensing for Reliable On-Body Sweat Analysis. ACS Sensors, 2021, 6, 2763-2771.	7.8	98
16	Wearable Potentiometric Ion Patch for On-Body Electrolyte Monitoring in Sweat: Toward a Validation Strategy to Ensure Physiological Relevance. Analytical Chemistry, 2019, 91, 8644-8651.	6.5	93
17	Ion-selective electrodes using multi-walled carbon nanotubes as ion-to-electron transducers for the detection of perchlorate. Analyst, The, 2009, 134, 1905.	3.5	86
18	Paper-Based Thin-Layer Coulometric Sensor for Halide Determination. Analytical Chemistry, 2015, 87, 1981-1990.	6.5	82

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19	Nanostructured materials in potentiometry. Analytical and Bioanalytical Chemistry, 2011, 399, 171-181.	3.7	80
20	Thin Layer Ionophore-Based Membrane for Multianalyte Ion Activity Detection. Analytical Chemistry, 2015, 87, 7729-7737.	6.5	78
21	Modern creatinine (Bio)sensing: Challenges of point-of-care platforms. Biosensors and Bioelectronics, 2019, 130, 110-124.	10.1	74
22	Electrogenerated Chemiluminescence for Potentiometric Sensors. Journal of the American Chemical Society, 2012, 134, 205-207.	13.7	73
23	Reversible Sensing of the Anticoagulant Heparin with Protamine Permselective Membranes. Angewandte Chemie - International Edition, 2012, 51, 12575-12578.	13.8	62
24	In Situ Detection of Species Relevant to the Carbon Cycle in Seawater with Submersible Potentiometric Probes. Environmental Science and Technology Letters, 2017, 4, 410-415.	8.7	59
25	In Situ Detection of Macronutrients and Chloride in Seawater by Submersible Electrochemical Sensors. Analytical Chemistry, 2018, 90, 4702-4710.	6.5	59
26	Solid-contact pH-selective electrode using multi-walled carbon nanotubes. Analytical and Bioanalytical Chemistry, 2009, 395, 2371-2376.	3.7	58
27	Ionophore-Based Voltammetric Ion Activity Sensing with Thin Layer Membranes. Analytical Chemistry, 2016, 88, 1654-1660.	6.5	57
28	Magnetizing lead-free halide double perovskites. Science Advances, 2020, 6, .	10.3	56
29	Microneedle based electrochemical (Bio)Sensing: Towards decentralized and continuous health status monitoring. TrAC - Trends in Analytical Chemistry, 2021, 135, 116148.	11.4	54
30	In Situ Ammonium Profiling Using Solid-Contact Ion-Selective Electrodes in Eutrophic Lakes. Analytical Chemistry, 2015, 87, 11990-11997.	6.5	53
31	Polyurethane Ionophore-Based Thin Layer Membranes for Voltammetric Ion Activity Sensing. Analytical Chemistry, 2016, 88, 5649-5654.	6.5	53
32	PEDOT(PSS) as Solid Contact for Ion-Selective Electrodes: The Influence of the PEDOT(PSS) Film Thickness on the Equilibration Times. Analytical Chemistry, 2017, 89, 3508-3516.	6.5	53
33	Potentiometric Sensors with Ion-Exchange Donnan Exclusion Membranes. Analytical Chemistry, 2013, 85, 6208-6212.	6.5	50
34	Dynamic electrochemistry with ionophore based ion-selective membranes. RSC Advances, 2013, 3, 25461.	3.6	49
35	Tandem Electrochemical Desalinationâ€“Potentiometric Nitrate Sensing for Seawater Analysis. Analytical Chemistry, 2015, 87, 8084-8089.	6.5	47
36	Robust Solid-Contact Ion Selective Electrodes for High-Resolution In Situ Measurements in Fresh Water Systems. Environmental Science and Technology Letters, 2017, 4, 286-291.	8.7	46

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37	Can Wearable Sweat Lactate Sensors Contribute to Sports Physiology?. ACS Sensors, 2021, 6, 3496-3508.	7.8	45
38	Toward In Vivo Transdermal pH Sensing with a Validated Microneedle Membrane Electrode. ACS Sensors, 2021, 6, 1129-1137.	7.8	43
39	In-Line Acidification for Potentiometric Sensing of Nitrite in Natural Waters. Analytical Chemistry, 2017, 89, 571-575.	6.5	39
40	Voltammetric Thin-Layer Ionophore-Based Films: Part 1. Experimental Evidence and Numerical Simulations. Analytical Chemistry, 2017, 89, 586-594.	6.5	39
41	Why ammonium detection is particularly challenging but insightful with ionophore-based potentiometric sensors â€“ an overview of the progress in the last 20 years. Analyst, The, 2020, 145, 3188-3210.	3.5	39
42	Direct Ion Speciation Analysis with Ion-Selective Membranes Operated in a Sequential Potentiometric/Time Resolved Chronopotentiometric Sensing Mode. Analytical Chemistry, 2012, 84, 8813-8821.	6.5	37
43	Electrochemical Mechanism of Ferrocene-Based Redox Molecules in Thin Film Membrane Electrodes. Electrochimica Acta, 2017, 238, 357-367.	5.2	36
44	Efficient BiVO₄ Photoanodes by Postsynthetic Treatment: Remarkable Improvements in Photoelectrochemical Performance from Facile Borate Modification. Angewandte Chemie, 2019, 131, 19203-19209.	2.0	35
45	Cytotoxicity Study of Ionophore-Based Membranes: Toward On-Body and in Vivo Ion Sensing. ACS Sensors, 2019, 4, 2524-2535.	7.8	35
46	Direct Detection of Acidity, Alkalinity, and pH with Membrane Electrodes. Analytical Chemistry, 2012, 84, 10165-10169.	6.5	34
47	Evidence of double layer/capacitive charging in carbon nanomaterial-based solid contact polymeric ion-selective electrodes. Chemical Communications, 2016, 52, 9703-9706.	4.1	33
48	The oxidation state of copper in bimetallic (Ptâ€“Cu, Pdâ€“Cu) catalysts during water denitration. Catalysis Science and Technology, 2012, 2, 794.	4.1	32
49	The sweet detection of rolling circle amplification: Glucose-based electrochemical genosensor for the detection of viral nucleic acid. Biosensors and Bioelectronics, 2020, 151, 112002.	10.1	32
50	Exhaustive Thin-Layer Cyclic Voltammetry for Absolute Multianalyte Halide Detection. Analytical Chemistry, 2014, 86, 11387-11395.	6.5	31
51	Chronopotentiometric Carbonate Detection with All-Solid-State Ionophore-Based Electrodes. Analytical Chemistry, 2014, 86, 6307-6314.	6.5	30
52	Potentiometric sensing array for monitoring aquatic systems. Environmental Sciences: Processes and Impacts, 2015, 17, 906-914.	3.5	30
53	Fluorinated tripodal receptors for potentiometric chloride detection in biological fluids. Biosensors and Bioelectronics, 2018, 99, 70-76.	10.1	29
54	Highâ€Selective Tramadol Sensor Based on Modified Molecularly Imprinted Polymerï£¿Carbon Paste Electrode with Multiwalled Carbon Nanotubes. Electroanalysis, 2013, 25, 1159-1168.	2.9	27

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55	Electrochemical Ion Transfer with Thin Films of Poly(3-octylthiophene). Analytical Chemistry, 2016, 88, 6939-6946.	6.5	27
56	Local Acidification of Membrane Surfaces for Potentiometric Sensing of Anions in Environmental Samples. ACS Sensors, 2016, 1, 48-54.	7.8	26
57	Ferrocene self assembled monolayer as a redox mediator for triggering ion transfer across nanometer-sized membranes. Electrochimica Acta, 2019, 315, 84-93.	5.2	26
58	Thinâ€Layer Chemical Modulations by a Combined Selective Proton Pump and pH Probe for Direct Alkalinity Detection. Angewandte Chemie - International Edition, 2015, 54, 8110-8113.	13.8	25
59	All solid state chronopotentiometric ion-selective electrodes based on ferrocene functionalized PVC. Journal of Electroanalytical Chemistry, 2013, 709, 118-125.	3.8	22
60	Thin-Layer Potentiometry for Creatinine Detection in Undiluted Human Urine Using Ion-Exchange Membranes as Barriers for Charged Interferences. Analytical Chemistry, 2020, 92, 3315-3323.	6.5	22
61	Thin Layer Coulometry Based on Ion-Exchanger Membranes for Heparin Detection in Undiluted Human Blood. Analytical Chemistry, 2014, 86, 1357-1360.	6.5	21
62	Molybdenum and boron synergistically boosting efficient electrochemical nitrogen fixation. Nano Energy, 2020, 78, 105391.	16.0	21
63	Electrochemical biosensor for glycine detection in biological fluids. Biosensors and Bioelectronics, 2021, 182, 113154.	10.1	20
64	Nitriteâ€Selective Electrode Based On Cobalt(II) tertâ€Butylâ€Salophen Ionophore. Electroanalysis, 2014, 26, 473-480.	2.9	19
65	Voltammetric Thin-Layer Ionophore-Based Films: Part 2. Semi-Empirical Treatment. Analytical Chemistry, 2017, 89, 595-602.	6.5	19
66	Porous Cellulose Nanofiber-Based Microcapsules for Biomolecular Sensing. ACS Applied Materials & Interfaces, 2018, 10, 41146-41154.	8.0	19
67	Electrochemical detection of trace silver. Electrochimica Acta, 2021, 374, 137929.	5.2	19
68	Thin Layer Samples Controlled by Dynamic Electrochemistry. Chimia, 2015, 69, 203.	0.6	18
69	Polyaniline Films as Electrochemical-Proton Pump for Acidification of Thin Layer Samples. Analytical Chemistry, 2019, 91, 14951-14959.	6.5	18
70	Lowering the limit of detection of ion-selective membranes backside contacted with a film of poly(3-octylthiophene). Sensors and Actuators B: Chemical, 2019, 297, 126781.	7.8	17
71	Thinâ€Layer Chemical Modulations by a Combined Selective Proton Pump and pH Probe for Direct Alkalinity Detection. Angewandte Chemie, 2015, 127, 8228-8231.	2.0	16
72	Phenytoin speciation with potentiometric and chronopotentiometric ion-selective membrane electrodes. Biosensors and Bioelectronics, 2016, 79, 114-120.	10.1	15

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73	Ionophore-based ion optodes without a reference ion: electrogenerated chemiluminescence for potentiometric sensors. Analyst, The, 2012, 137, 4988.	3.5	13
74	Coulometric Calcium Pump for Thin Layer Sample Titrations. Analytical Chemistry, 2015, 87, 10125-10130.	6.5	13
75	Selective electrochemical hydrogen evolution on cerium oxide protected catalyst surfaces. Electrochimica Acta, 2020, 341, 136022.	5.2	13
76	Subnanomolar detection of ions using thin voltammetric membranes with reduced Exchange capacity. Sensors and Actuators B: Chemical, 2020, 321, 128453.	7.8	13
77	Potentiometric pH Nanosensor for Intracellular Measurements: Real-Time and Continuous Assessment of Local Gradients. Analytical Chemistry, 2021, 93, 15744-15751.	6.5	13
78	Alkalinization of Thin Layer Samples with a Selective Proton Sink Membrane Electrode for Detecting Carbonate by Carbonate-Selective Electrodes. Analytical Chemistry, 2016, 88, 3444-3448.	6.5	12
79	Selective Hydrogen Evolution on Manganese Oxide Coated Electrodes: New Cathodes for Sodium Chlorate Production. ACS Sustainable Chemistry and Engineering, 2019, 7, 12170-12178.	6.7	12
80	GalvaPot, a custom-made combination galvanostat/potentiostat and high impedance potentiometer for decentralized measurements of ionophore-based electrodes. Sensors and Actuators B: Chemical, 2015, 207, 631-639.	7.8	10
81	Thin Layer Coulometry of Nitrite with Ionâ€Selective Membranes. Electroanalysis, 2015, 27, 609-615.	2.9	10
82	Capturing the Real-Time Hydrolytic Degradation of a Library of Biomedical Polymers by Combining Traditional Assessment and Electrochemical Sensors. Biomacromolecules, 2021, 22, 949-960.	5.4	10
83	Reagentless Acidâ€“Base Titration for Alkalinity Detection in Seawater. Analytical Chemistry, 2021, 93, 14130-14137.	6.5	10
84	Electrogenerated chemiluminescence triggered by electroseparation of Ru(bpy)32+ across a supported liquid membrane. Chemical Communications, 2011, 47, 11644.	4.1	9
85	Why Not Glycine Electrochemical Biosensors?. Sensors, 2020, 20, 4049.	3.8	9
86	Anodic Stripping Voltammetry with the Hanging Mercury Drop Electrode for Trace Metal Detection in Soil Samples. Chemosensors, 2021, 9, 107.	3.6	9
87	Flow Chronopotentiometry with Ion-Selective Membranes for Cation, Anion, and Polyion Detection. Analytical Chemistry, 2016, 88, 3945-3952.	6.5	8
88	Counter electrode based on an ion-exchanger Donnan exclusion membrane for bioelectroanalysis. Biosensors and Bioelectronics, 2014, 61, 64-69.	10.1	7
89	Using Potentiometric Electrodes Based on Nonselective Polymeric Membranes as Potential Universal Detectors for Ion Chromatography: Investigating an Original Research Problem from an Inquiry-Based-Learning Perspective. Journal of Chemical Education, 2018, 95, 2172-2181.	2.3	7
90	Spectroelectrochemical Evidence of Interconnected Charge and Ion Transfer in Ultrathin Membranes Modulated by a Redox Conducting Polymer. Analytical Chemistry, 2020, 92, 14085-14093.	6.5	7

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91	Semi-empirical treatment of ionophore-assisted ion-transfers in ultrathin membranes coupled to a redox conducting polymer. Electrochimica Acta, 2021, 388, 138634.	5.2	6
92	Towards Ionâ€Selective Membranes with Electrogenerated Chemiluminescence Detection: Visualizing Selective Ru(bpy)₃²⁺ Transport Across a Plasticized Poly(vinyl chloride) Membrane. Electroanalysis, 2012, 24, 61-68.	2.9	3
93	Modelling electrochemical modulation of ion release in thin-layer samples. Journal of Electroanalytical Chemistry, 2021, 903, 115851.	3.8	3
94	Ultrathin ion-selective membranes for trace detection of lead, copper and silver ions. Electrochimica Acta, 2022, 427, 140870.	5.2	3
95	Electron Hopping between Fe 3â€‰d States in Ethynylferroceneâ€doped Poly(Methyl) Tj ETQq1 1 0.784314 rgBT /Overlock 10 Tf 50	2.9	2
96	Agarose hydrogel containing immobilized pH buffer microemulsion without increasing permselectivity. Talanta, 2018, 177, 191-196.	5.5	2
97	Spectroelectrochemistry with Ultrathin Ion-Selective Membranes: Three Distinct Ranges for Analytical Sensing. Analytical Chemistry, 2022, 94, 9140-9148.	6.5	2
98	Environmental Sensing of Aquatic Systems at the University of Geneva. Chimia, 2014, 68, 772-777.	0.6	1
99	Selective Ion Capturing via Carbon Nanotubes Charging. Analytical Chemistry, 2022, , .	6.5	1