

# Panagiota S Petrou

## List of Publications by Year in descending order

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98  
papers

1,731  
citations

279487

23  
h-index

344852

36  
g-index

98  
all docs

98  
docs citations

98  
times ranked

2108  
citing authors

#	ARTICLE	IF	CITATIONS
1	A Monolithic Silicon Optoelectronic Transducer as a Real-Time Affinity Biosensor. <i>Analytical Chemistry</i> , 2004, 76, 1366-1373.	3.2	92
2	Disposable integrated bismuth citrate-modified screen-printed immunosensor for ultrasensitive quantum dot-based electrochemical assay of C-reactive protein in human serum. <i>Analytica Chimica Acta</i> , 2015, 886, 29-36.	2.6	66
3	Controlled protein adsorption on microfluidic channels with engineered roughness and wettability. <i>Sensors and Actuators B: Chemical</i> , 2012, 161, 216-222.	4.0	58
4	A biomolecule friendly photolithographic process for fabrication of protein microarrays on polymeric films coated on silicon chips. <i>Biosensors and Bioelectronics</i> , 2007, 22, 1994-2002.	5.3	56
5	Three-dimensional plasma micro-“nanotextured cyclo-olefin-polymer surfaces for biomolecule immobilization and environmentally stable superhydrophobic and superoleophobic behavior. <i>Chemical Engineering Journal</i> , 2016, 300, 394-403.	6.6	56
6	Lab-on-a-Membrane Foldable Devices for Duplex Drop-Volume Electrochemical Biosensing Using Quantum Dot Tags. <i>Analytical Chemistry</i> , 2016, 88, 6897-6904.	3.2	55
7	Biocompatible photolithographic process for the patterning of biomolecules. <i>Biosensors and Bioelectronics</i> , 2002, 17, 269-278.	5.3	52
8	Paper-Based Microfluidic Device with Integrated Sputtered Electrodes for Stripping Voltammetric Determination of DNA via Quantum Dot Labeling. <i>Analytical Chemistry</i> , 2018, 90, 1092-1097.	3.2	49
9	Microfabricated Tin-“Film Electrodes for Protein and DNA Sensing Based on Stripping Voltammetric Detection of Cd(II) Released from Quantum Dots Labels. <i>Analytical Chemistry</i> , 2013, 85, 10686-10691.	3.2	44
10	Selective aggregation of PAMAM dendrimer nanocarriers and PAMAM/ZnPc nanodrugs on human atheromatous carotid tissues: a photodynamic therapy for atherosclerosis. <i>Nanoscale Research Letters</i> , 2015, 10, 210.	3.1	42
11	Assessment of goat milk adulteration with a label-free monolithically integrated optoelectronic biosensor. <i>Analytical and Bioanalytical Chemistry</i> , 2015, 407, 3995-4004.	1.9	42
12	Detection of ochratoxin A in beer samples with a label-free monolithically integrated optoelectronic biosensor. <i>Journal of Hazardous Materials</i> , 2017, 323, 75-83.	6.5	41
13	Simultaneous determination of aflatoxin B1, fumonisin B1 and deoxynivalenol in beer samples with a label-free monolithically integrated optoelectronic biosensor. <i>Journal of Hazardous Materials</i> , 2018, 359, 445-453.	6.5	41
14	Quantum dot-based electrochemical DNA biosensor using a screen-printed graphite surface with embedded bismuth precursor. <i>Electrochemistry Communications</i> , 2015, 60, 47-51.	2.3	38
15	Surface density dependent orientation and immunological recognition of antibody on silicon: TOF-SIMS and surface analysis of two covalent immobilization methods. <i>Applied Surface Science</i> , 2020, 518, 146269.	3.1	38
16	Simultaneous determination of CRP and D-dimer in human blood plasma samples with White Light Reflectance Spectroscopy. <i>Biosensors and Bioelectronics</i> , 2016, 84, 89-96.	5.3	37
17	Ultrafast Multiplexed-Allergen Detection through Advanced Fluidic Design and Monolithic Interferometric Silicon Chips. <i>Analytical Chemistry</i> , 2018, 90, 9559-9567.	3.2	35
18	Simultaneous determination of paraquat and atrazine in water samples with a white light reflectance spectroscopy biosensor. <i>Journal of Hazardous Materials</i> , 2018, 359, 67-75.	6.5	31

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19	Fast simultaneous detection of three pesticides by a White Light Reflectance Spectroscopy sensing platform. <i>Sensors and Actuators B: Chemical</i> , 2017, 238, 1214-1223.	4.0	30
20	Real-time detection of BRCA1 gene mutations using a monolithic silicon optocoupler array. <i>Biosensors and Bioelectronics</i> , 2009, 24, 1341-1347.	5.3	28
21	Electrochemical biosensor microarray functionalized by means of biomolecule friendly photolithography. <i>Biosensors and Bioelectronics</i> , 2010, 25, 2115-2121.	5.3	26
22	Fully integrated monolithic optoelectronic transducer for real-time protein and DNA detection: The NEMOSLAB approach. <i>Biosensors and Bioelectronics</i> , 2010, 26, 1528-1535.	5.3	24
23	Fast label-free detection of C-reactive protein using broad-band Mach-Zehnder interferometers integrated on silicon chips. <i>Talanta</i> , 2017, 165, 458-465.	2.9	24
24	Fast, sensitive and selective determination of herbicide glyphosate in water samples with a White Light Reflectance Spectroscopy immunosensor. <i>Talanta</i> , 2020, 214, 120854.	2.9	24
25	Dual-cardiac marker capillary waveguide fluoroimmunosensor based on tyramide signal amplification. <i>Analytical and Bioanalytical Chemistry</i> , 2010, 396, 1187-1196.	1.9	22
26	Flexible Microfabricated Film Sensors for the in Situ Quantum Dot-Based Voltammetric Detection of DNA Hybridization in Microwells. <i>Analytical Chemistry</i> , 2015, 87, 853-857.	3.2	21
27	A label-free flow-through immunosensor for determination of total- and free-PSA in human serum samples based on white-light reflectance spectroscopy. <i>Sensors and Actuators B: Chemical</i> , 2015, 209, 1041-1048.	4.0	21
28	Commercially available chemicals as immunizing haptens for the development of a polyclonal antibody recognizing carbendazim and other benzimidazole-type fungicides. <i>Chemosphere</i> , 2015, 119, S16-S20.	4.2	21
29	Rapid and sensitive label-free determination of aflatoxin M1 levels in milk through a White Light Reflectance Spectroscopy immunosensor. <i>Sensors and Actuators B: Chemical</i> , 2019, 282, 104-111.	4.0	21
30	Multiplexed mycotoxins determination employing white light reflectance spectroscopy and silicon chips with silicon oxide areas of different thickness. <i>Biosensors and Bioelectronics</i> , 2020, 153, 112035.	5.3	21
31	157-nm Laser ablation of polymeric layers for fabrication of biomolecule microarrays. <i>Analytical and Bioanalytical Chemistry</i> , 2005, 381, 1027-1032.	1.9	20
32	High-density protein patterning through selective plasma-induced fluorocarbon deposition on Si substrates. <i>Biosensors and Bioelectronics</i> , 2009, 24, 2979-2984.	5.3	19
33	Visualization of the membrane engineering concept: evidence for the specific orientation of electroinserted antibodies and selective binding of target analytes. <i>Journal of Molecular Recognition</i> , 2013, 26, 627-632.	1.1	18
34	Imaging and chemical surface analysis of biomolecular functionalization of monolithically integrated on silicon Mach-Zehnder interferometric immunosensors. <i>Applied Surface Science</i> , 2016, 385, 529-542.	3.1	18
35	Rapid Detection of <i>Salmonella typhimurium</i> in Drinking Water by a White Light Reflectance Spectroscopy Immunosensor. <i>Sensors</i> , 2021, 21, 2683.	2.1	18
36	Real-time label-free detection of complement activation products in human serum by white light reflectance spectroscopy. <i>Biosensors and Bioelectronics</i> , 2009, 24, 3359-3364.	5.3	17

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37	Development and Bioanalytical Applications of a White Light Reflectance Spectroscopy Label-Free Sensing Platform. <i>Biosensors</i> , 2017, 7, 46.	2.3	17
38	Rapid C-reactive protein determination in whole blood with a White Light Reflectance Spectroscopy label-free immunosensor for Point-of-Care applications. <i>Sensors and Actuators B: Chemical</i> , 2018, 260, 282-288.	4.0	17
39	Functionalization of silicon dioxide and silicon nitride surfaces with aminosilanes for optical biosensing applications. <i>Medical Devices &amp; Sensors</i> , 2020, 3, e10072.	2.7	17
40	Rapid detection of mozzarella and feta cheese adulteration with cow milk through a silicon photonic immunosensor. <i>Analyst, The</i> , 2021, 146, 529-537.	1.7	17
41	Protein arrays on high-surface-area plasma-nanotextured poly(dimethylsiloxane)-coated glass slides. <i>Colloids and Surfaces B: Biointerfaces</i> , 2011, 83, 270-276.	2.5	16
42	Orthogonal Patterning of Multiple Biomolecules Using an Organic Fluorinated Resist and Imprint Lithography. <i>Biomacromolecules</i> , 2013, 14, 993-1002.	2.6	16
43	Imaging and spectroscopic comparison of multi-step methods to form DNA arrays based on the biotin-streptavidin system. <i>Analyst, The</i> , 2015, 140, 1127-1139.	1.7	15
44	Development of an indirect enzyme immunoassay for the determination of thiabendazole in white and red wines. <i>International Journal of Environmental Analytical Chemistry</i> , 2015, 95, 1299-1309.	1.8	15
45	Orientation and biorecognition of immunoglobulin adsorbed on spin-cast poly(3-alkylthiophenes): Impact of polymer film crystallinity. <i>Colloids and Surfaces B: Biointerfaces</i> , 2016, 148, 278-286.	2.5	15
46	Protein-Resistant Cross-Linked Poly(vinyl alcohol) Micropatterns via Photolithography Using Removable Polyoxometalate Photocatalyst. <i>ACS Applied Materials &amp; Interfaces</i> , 2014, 6, 17463-17473.	4.0	14
47	3D printed microcell featuring a disposable nanocomposite Sb/Sn immunosensor for quantum dot-based electrochemical determination of adulteration of ewe/goat's cheese with cow's milk. <i>Sensors and Actuators B: Chemical</i> , 2021, 334, 129614.	4.0	14
48	Indirect immunoassay on functionalized silicon surface: Molecular arrangement, composition and orientation examined step-by-step with multi-technique and multivariate analysis. <i>Colloids and Surfaces B: Biointerfaces</i> , 2017, 150, 437-444.	2.5	13
49	Three-dimensional (3D) plasma micro-nanotextured slides for high performance biomolecule microarrays: Comparison with epoxy-silane coated glass slides. <i>Colloids and Surfaces B: Biointerfaces</i> , 2018, 165, 270-277.	2.5	13
50	Increased sensitivity of heterogeneous fluoroimmunoassays employing fluorescein-labeled antibodies by simple treatment of the wells with glycerin solution. <i>Journal of Immunological Methods</i> , 2002, 266, 175-179.	0.6	12
51	Antibody Coating Approach Involving Gamma Globulins from Non-immunized Animal and Second Antibody Antiserum. <i>Journal of Immunoassay</i> , 1998, 19, 271-293.	0.3	11
52	Glycerin Suppression of Fluorescence Self-Quenching and Improvement of Heterogeneous Fluoroimmunoassay Sensitivity. <i>Analytical Chemistry</i> , 2007, 79, 647-653.	3.2	11
53	Guided cell adhesion, orientation, morphology and differentiation on silicon substrates photolithographically micropatterned with a cell-repellent cross-linked poly(vinyl alcohol) film. <i>Biomedical Materials (Bristol)</i> , 2019, 14, 014101.	1.7	11
54	Simultaneous Detection of Salmonella typhimurium and Escherichia coli O157:H7 in Drinking Water and Milk with Mach-Zehnder Interferometers Monolithically Integrated on Silicon Chips. <i>Biosensors</i> , 2022, 12, 507.	2.3	11

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55	Heterogeneous fluoroimmunoassays using fluorescein as label with measurement of the fluorescence signal directly onto the solid-phase. <i>Journal of Immunological Methods</i> , 1999, 222, 183-187.	0.6	10
56	White light reflectance spectroscopy biosensing system for fast quantitative prostate specific antigen determination in forensic samples. <i>Talanta</i> , 2017, 175, 443-450.	2.9	10
57	Protein adsorption/desorption and antibody binding stoichiometry on silicon interferometric biosensors examined with TOF-SIMS. <i>Applied Surface Science</i> , 2018, 444, 187-196.	3.1	10
58	Immobilization of oligonucleotide probes on silicon surfaces using biotin-streptavidin system examined with microscopic and spectroscopic techniques. <i>Applied Surface Science</i> , 2014, 290, 199-206.	3.1	9
59	Contact pin-printing of albumin-fungicide conjugate for silicon nitride-based sensors biofunctionalization: Multi-technique surface analysis for optimum immunoassay performance. <i>Applied Surface Science</i> , 2017, 410, 79-86.	3.1	9
60	Orientation of Biotin-Binding Sites in Streptavidin Adsorbed onto the Surface of Polythiophene Films. <i>Langmuir</i> , 2019, 35, 3058-3066.	1.6	9
61	Development of a Point-of-Care System Based on White Light Reflectance Spectroscopy: Application in CRP Determination. <i>Biosensors</i> , 2021, 11, 268.	2.3	9
62	Capillary waveguide fluoroimmunosensor with improved repeatability and detection sensitivity. <i>Analytical and Bioanalytical Chemistry</i> , 2009, 393, 1081-1086.	1.9	8
63	Label-Free Biosensors Based onto Monolithically Integrated onto Silicon Optical Transducers. <i>Chemosensors</i> , 2018, 6, 52.	1.8	8
64	Photopatternable materials for guided cell adhesion and growth. <i>European Polymer Journal</i> , 2022, 162, 110896.	2.6	8
65	Directly immersible silicon photonic probes: Application to rapid SARS-CoV-2 serological testing. <i>Biosensors and Bioelectronics</i> , 2022, 215, 114570.	5.3	8
66	Protein immobilization and detection on laser processed polystyrene surfaces. <i>Journal of Applied Physics</i> , 2011, 110, .	1.1	7
67	Nanothermodynamics Mediates Drug Delivery. <i>Advances in Experimental Medicine and Biology</i> , 2015, 822, 213-220.	0.8	7
68	Fast and Sensitive Determination of the Fungicide Carbendazim in Fruit Juices with an Immunosensor Based on White Light Reflectance Spectroscopy. <i>Biosensors</i> , 2021, 11, 153.	2.3	7
69	A regenerable flow-through affinity sensor for label-free detection of proteins and DNA. <i>Journal of Chromatography B: Analytical Technologies in the Biomedical and Life Sciences</i> , 2010, 878, 237-242.	1.2	6
70	Three-dimensional (3D) hierarchical oxygen plasma micro/nanostructured polymeric substrates for selective enrichment of cancer cells from mixtures with normal ones. <i>Colloids and Surfaces B: Biointerfaces</i> , 2020, 187, 110675.	2.5	6
71	Poly-L-histidine coated microfluidic devices for bacterial DNA purification without chaotropic solutions. <i>Biomedical Microdevices</i> , 2020, 22, 44.	1.4	6
72	Current Progress on Biosensors and Point-of-Care Devices for Sepsis Diagnosis. <i>IEEE Sensors Journal</i> , 2021, 21, 12840-12855.	2.4	6

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73	Comparison of Physical Adsorption and Covalent Coupling Methods for Surface Density-Dependent Orientation of Antibody on Silicon. <i>Molecules</i> , 2022, 27, 3672.	1.7	6
74	Bulk fluorescence light blockers to improve homogeneous detection in capillary-waveguide fluoroimmunosensors. <i>Biosensors and Bioelectronics</i> , 2009, 24, 2735-2739.	5.3	5
75	Photopatterned PLED arrays for biosensing applications. <i>Microelectronic Engineering</i> , 2009, 86, 1511-1514.	1.1	5
76	Monolithically-integrated Young interferometers for label-free and multiplexed detection of biomolecules. <i>Proceedings of SPIE</i> , 2016, , .	0.8	5
77	Broadband Young interferometry for simultaneous dual polarization bioanalytics. <i>Journal of the Optical Society of America B: Optical Physics</i> , 2017, 34, 1691.	0.9	5
78	Fast Deoxynivalenol Determination in Cereals Using a White Light Reflectance Spectroscopy Immunosensor. <i>Biosensors</i> , 2020, 10, 154.	2.3	5
79	Cell array fabrication by plasma nanotexturing. , 2013, , .		4
80	Bio-orthogonal fluorinated resist for biomolecules patterning applications. <i>Colloids and Surfaces B: Biointerfaces</i> , 2019, 178, 208-213.	2.5	4
81	Spatially selective biomolecules immobilization on silicon nitride waveguides through contact printing onto plasma treated photolithographic micropattern: Step-by-step analysis with TOF-SIMS chemical imaging. <i>Applied Surface Science</i> , 2020, 506, 145002.	3.1	4
82	Ultra-thin poly(dimethylsiloxane) film-coated glass capillaries for fluoroimmunosensing applications. <i>Microelectronic Engineering</i> , 2009, 86, 1491-1494.	1.1	3
83	Oxygen plasma micro-nanostructured PMMA plates and microfluidics for increased adhesion and proliferation of cancer versus normal cells: The role of surface roughness and disorder. <i>Micro and Nano Engineering</i> , 2020, 8, 100060.	1.4	3
84	Reacquisition of a spindle cell shape does not lead to the restoration of a youthful state in senescent human skin fibroblasts. <i>Biogerontology</i> , 2020, 21, 695-708.	2.0	3
85	A perspective on ToF-SIMS analysis of biosensor interfaces: Controlling and optimizing multi-molecular composition, immobilization through bioprinting, molecular orientation. <i>Applied Surface Science</i> , 2022, 594, 153439.	3.1	3
86	IMPROVED ANTIBODY COATING PROTOCOL USING A SECOND ANTIBODY ANTISERUM. APPLICATION TO TOTAL THYROXIN IMMUNOASSAY. <i>Journal of Immunoassay and Immunochemistry</i> , 2001, 22, 235-251.	0.5	2
87	Monolithically integrated biosensors based on Frequency-Resolved Mach-Zehnder Interferometers for multi-analyte determinations. , 2010, 2010, 298-301.		2
88	Monolithically integrated Mach-Zehnder biosensors for real-time label-free monitoring of biomolecular reactions. , 2011, 2011, 7654-7.		2
89	3D Plasma Nanotextured <sup>®</sup> Polymeric Surfaces for Protein or Antibody Arrays, and Biomolecule and Cell Patterning. <i>Methods in Molecular Biology</i> , 2018, 1771, 27-40.	0.4	2
90	A flow-through optical sensor system for label-free detection of proteins and DNA. , 2009, , .		1

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91	Real-time multi-analyte label-free detection of proteins by white light reflectance spectroscopy. , 2014, , .		1
92	Monolithic optoelectronic chip for label-free multi-analyte sensing applications. , 2014, , .		1
93	Simultaneous Detection of Salmonella typhimurium and Escherichia coli O157:H7 in Drinking Water with Machâ€Zehnder Interferometers Monolithically Integrated on Silicon Chips. , 2022, 16, .		1
94	Photolithographic Process Based on High Contrast Acrylate Photoresist for Multi-Protein Patterning. Materials Research Society Symposia Proceedings, 2006, 950, 1.	0.1	0
95	A miniaturized optoelectronic system for rapid quantitative label-free detection of harmful species in food. Proceedings of SPIE, 2016, , .	0.8	0
96	Interferometry-Based Immunoassays. , 2018, , 241-271.		0
97	Monolithically Integrated Label-Free Optical Immunosensors. , 2022, 16, .		0
98	Fast and Accurate Determination of Minute Ochratoxin A Levels in Cereal Flours: Towards Application at the Field. , 2022, 16, .		0