Yordan Kostov

List of Publications by Year in descending order

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102 papers	3,679 citations	159585 30 h-index	144013 57 g-index
102 all docs	102 docs citations	102 times ranked	3545 citing authors

#	Article	IF	Citations
1	The Design and Fabrication of Three-Chamber Microscale Cell Culture Analog Devices with Integrated Dissolved Oxygen Sensors. Biotechnology Progress, 2008, 20, 338-345.	2.6	299
2	Functional cardiac cell constructs on cellulose-based scaffolding. Biomaterials, 2004, 25, 5753-5762.	11.4	289
3	Low-cost microbioreactor for high-throughput bioprocessing. Biotechnology and Bioengineering, 2001, 72, 346-352.	3.3	189
4	Dual Excitation Ratiometric Fluorescent pH Sensor for Noninvasive Bioprocess Monitoring: Development and Application. Biotechnology Progress, 2002, 18, 1047-1053.	2.6	149
5	Bioprocess monitoring. Current Opinion in Biotechnology, 2002, 13, 124-127.	6.6	146
6	ELISA-LOC: lab-on-a-chip for enzyme-linked immunodetection. Lab on A Chip, 2010, 10, 2093.	6.0	116
7	Gold nanoparticle-based enhanced chemiluminescence immunosensor for detection of Staphylococcal Enterotoxin B (SEB) in food. International Journal of Food Microbiology, 2009, 133, 265-271.	4.7	107
8	Validation of an optical sensor-based high-throughput bioreactor system for mammalian cell culture. Journal of Biotechnology, 2006, 122, 293-306.	3.8	97
9	Membranes for optical pH sensors. Analytica Chimica Acta, 1993, 280, 15-19.	5.4	96
10	Comparisons of optical pH and dissolved oxygen sensors with traditional electrochemical probes during mammalian cell culture. Biotechnology and Bioengineering, 2007, 97, 833-841.	3.3	90
11	Noninvasive measurement of dissolved oxygen in shake flasks. Biotechnology and Bioengineering, 2002, 80, 594-597.	3.3	89
12	Carbon Nanotubes with Enhanced Chemiluminescence Immunoassay for CCD-Based Detection of Staphylococcal Enterotoxin B in Food. Analytical Chemistry, 2008, 80, 8532-8537.	6.5	82
13	Point-of-care production of therapeutic proteins of good-manufacturing-practice quality. Nature Biomedical Engineering, 2018, 2, 675-686.	22.5	79
14	High-stability non-invasive autoclavable naked optical CO2 sensor. Biosensors and Bioelectronics, 2003, 18, 857-865.	10.1	70
15	Design and performance of a 24-station high throughput microbioreactor. Biotechnology and Bioengineering, 2006, 93, 6-13.	3.3	69
16	Low-cost optical instrumentation for biomedical measurements. Review of Scientific Instruments, 2000, 71, 4361.	1.3	68
17	Lab-on-a-chip for carbon nanotubes based immunoassay detection of Staphylococcal Enterotoxin B (SEB). Lab on A Chip, 2010, 10, 1011.	6.0	68
18	Rapid method for the preparation of a robust optical pH sensor. Analyst, The, 2003, 128, 1181.	3.5	65

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19	A fluorescence detection platform using spatial electroluminescent excitation for measuring botulinum neurotoxin A activity. Biosensors and Bioelectronics, 2008, 24, 618-625.	10.1	58
20	Carbon nanotubes based optical immunodetection of Staphylococcal Enterotoxin B (SEB) in food. International Journal of Food Microbiology, 2008, 127, 78-83.	4.7	58
21	Miniaturized 96-well ELISA chips for staphylococcal enterotoxin B detection using portable colorimetric detector. Analytical and Bioanalytical Chemistry, 2009, 394, 499-505.	3.7	57
22	Low-cost noninvasive optical CO2 sensing system for fermentation and cell culture. Biotechnology and Bioengineering, 2005, 89, 329-334.	3.3	55
23	Lab-on-a-chip for botulinum neurotoxin a (BoNT-A) activity analysis. Lab on A Chip, 2009, 9, 3275.	6.0	55
24	Ratiometric oxygen sensing: detection of dual-emission ratio through a single emission filter. Analyst, The, 2000, 125, 1175-1178.	3.5	45
25	An automated point-of-care system for immunodetection of staphylococcal enterotoxin B. Analytical Biochemistry, 2011, 416, 74-81.	2.4	43
26	Lensless CCD-based fluorometer using a micromachined optical SÃ¶ller collimator. Lab on A Chip, 2011, 11, 941.	6.0	37
27	Cellâ€free production of a therapeutic protein: Expression, purification, and characterization of recombinant streptokinase using a CHO lysate. Biotechnology and Bioengineering, 2018, 115, 92-102.	3.3	36
28	Fiber optic biosensor for transdermal glucose based on the glucose binding protein. Sensors and Actuators B: Chemical, 2017, 242, 569-576.	7.8	34
29	All solid-state GFP sensor. Biotechnology and Bioengineering, 2000, 70, 473-477.	3.3	33
30	SPCE-based sensors: Ultrafast oxygen sensing using surface plasmon-coupled emission from ruthenium probes. Sensors and Actuators B: Chemical, 2007, 127, 432-440.	7.8	33
31	Development and application of an excitation ratiometric optical pH sensor for bioprocess monitoring. Biotechnology Progress, 2008, 24, 1393-1401.	2.6	32
32	Directional Surface Plasmon-Coupled Emission from a 3 nm Green Fluorescent Protein Monolayer. Biotechnology Progress, 2005, 21, 1731-1735.	2.6	29
33	Spectral resolution of molecular ensembles under ambient conditions using surface plasmon coupled fluorescence emission. Applied Optics, 2009, 48, 5348.	2.1	29
34	Multi-wavelength spatial LED illumination based detector for in vitro detection of botulinum neurotoxin A activity. Sensors and Actuators B: Chemical, 2010, 146, 297-306.	7.8	29
35	Unique Oxygen Analyzer Combining a Dual Emission Probe and a Low-Cost Solid-State Ratiometric Fluorometer. Applied Spectroscopy, 2000, 54, 864-868.	2.2	27
36	Optical analysis of liquid mixing in a minibioreactor. Biotechnology and Bioengineering, 2006, 93, 906-911.	3.3	26

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37	Optical Ratiometric Sensor for Alcohol Measurements. Analytical Letters, 2007, 40, 715-727.	1.8	26
38	Signal enhancement of surface plasmon-coupled directional emission by a conical mirror. Applied Optics, 2008, 47, 5229.	2.1	26
39	High-resolution surface plasmon coupled resonant filter for monitoring of fluorescence emission from molecular multiplexes. Applied Physics Letters, 2009, 94, 223113.	3.3	26
40	Image stacking approach to increase sensitivity of fluorescence detection using a low cost complementary metal-oxide-semiconductor (CMOS) webcam. Sensors and Actuators B: Chemical, 2012, 171-172, 141-147.	7.8	26
41	Electrical percolation-based biosensor for real-time direct detection of staphylococcal enterotoxin B (SEB). Biosensors and Bioelectronics, 2010, 25, 2573-2578.	10.1	25
42	Ratio measurements in oxygen determinations: wavelength ratiometry, lifetime discrimination, and polarization detection. Sensors and Actuators B: Chemical, 2003, 90, 139-142.	7.8	23
43	Ratiometric Sensing Using Dual-Frequency Lifetime Discrimination. Analytical Biochemistry, 2001, 297, 105-108.	2.4	22
44	An ELISA Lab-on-a-Chip (ELISA-LOC). Methods in Molecular Biology, 2013, 949, 451-471.	0.9	22
45	Sensors for biomanufacturing process development: facilitating the shift from batch to continuous manufacturing. Current Opinion in Chemical Engineering, 2018, 22, 115-127.	7.8	22
46	Low-cost device for ratiometric fluorescence measurements. Review of Scientific Instruments, 1999, 70, 4466-4470.	1.3	21
47	Wood Microfluidics. Analytical Chemistry, 2019, 91, 11004-11012.	6.5	20
48	Rapid recombinant protein expression in cell-free extracts from human blood. Scientific Reports, 2018, 8, 9569.	3.3	19
49	A simple 96-well microfluidic chip combined with visual and densitometry detection for resource-poor point of care testing. Sensors and Actuators B: Chemical, 2011, 153, 176-181.	7.8	18
50	Portable system for the detection of micromolar concentrations of glucose. Measurement Science and Technology, 2014, 25, 025701.	2.6	18
51	A Simple Portable Electroluminescence Illumination-Based CCD Detector. Methods in Molecular Biology, 2009, 503, 259-272.	0.9	18
52	First Observation of Surface Plasmon-Coupled Emission Due to LED Excitation. Journal of Fluorescence, 2005, 15, 895-900.	2.5	17
53	Improving the recombinant human erythropoietin glycosylation using microsome supplementation in CHO cellâ€free system. Biotechnology and Bioengineering, 2018, 115, 1253-1264.	3.3	17
54	A novel method for monitoring monoclonal antibody production during cell culture. Biotechnology and Bioengineering, 2008, 100, 448-457.	3.3	16

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55	Study on low-cost calibration-free pH sensing with disposable optical sensors. Analytica Chimica Acta, 2012, 734, 79-87.	5.4	16
56	Electrical percolation based biosensors. Methods, 2013, 63, 282-289.	3.8	16
57	Low-cost optical lifetime assisted ratiometric glutamine sensor based on glutamine binding protein. Analytical Biochemistry, 2008, 383, 61-67.	2.4	15
58	Development and characterization of a point-of care rate-based transcutaneous respiratory status monitor. Medical Engineering and Physics, 2018, 56, 36-41.	1.7	15
59	Study of the biouptake of labeled single-walled carbon nanotubes using fluorescence-based method. Environmental Chemistry Letters, 2011, 9, 235-241.	16.2	14
60	A unique noninvasive approach to monitoring dissolved O₂ and CO₂ in cell culture. Biotechnology and Bioengineering, 2015, 112, 104-110.	3.3	14
61	Optimizing cellâ€free protein expression in CHO: Assessing small molecule mass transfer effects in various reactor configurations. Biotechnology and Bioengineering, 2017, 114, 1478-1486.	3.3	14
62	Realâ€time dissolved carbon dioxide monitoring II: Surface aeration intensification for efficient CO 2 removal in shake flasks and miniâ€bioreactors leads to superior growth and recombinant protein yields. Biotechnology and Bioengineering, 2020, 117, 992-998.	3.3	14
63	Dynamic model of an optical absorption-based pH sensor. Analyst, The, 1993, 118, 987.	3.5	13
64	Optical Replacement of pH Electrode. IEEE Sensors Journal, 2009, 9, 219-220.	4.7	13
65	Optical Instrumentation for Bioprocess Monitoring. Advances in Biochemical Engineering/Biotechnology, 2009, 116, 125-142.	1.1	13
66	Lab-on-a-chip for label free biological semiconductor analysis of Staphylococcal Enterotoxin B. Lab on A Chip, 2010, 10, 2534.	6.0	13
67	A luminescence lifetime assisted ratiometric fluorimeter for biological applications. Review of Scientific Instruments, 2009, 80, 124302.	1.3	12
68	Biological Semiconductor Based on Electrical Percolation. Analytical Chemistry, 2010, 82, 3567-3572.	6.5	12
69	A completely noninvasive method of dissolved oxygen monitoring in disposable smallâ€scale cell culture vessels based on diffusion through permeable vessel walls. Biotechnology Progress, 2014, 30, 172-177.	2.6	12
70	Versatile common instrumentation for optical detection of pH and dissolved oxygen. Review of Scientific Instruments, 2015, 86, 074302.	1.3	12
71	Realâ€time dissolved carbon dioxide monitoring I: Application of a novel in situ sensor for CO 2 monitoring and control. Biotechnology and Bioengineering, 2020, 117, 981-991.	3.3	12
72	Polarization Oxygen Sensor:Â a Template for a Class of Fluorescence-Based Sensors. Analytical Chemistry, 2002, 74, 2167-2171.	6.5	11

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73	Studies of Surface-Adsorbed Fluorescently Labeled Casein and Concanavalin A Using Surface Plasmon-Coupled Emission. Plasmonics, 2010, 5, 383-387.	3.4	11
74	Solution deposition of nanometer scale silver films as an alternative to vapor deposition for plasmonic excitation. Thin Solid Films, 2010, 518, 3772-3777.	1.8	11
75	Detection of Trace Glucose on the Surface of a Semipermeable Membrane Using a Fluorescently Labeled Glucose-Binding Protein: A Promising Approach to Noninvasive Glucose Monitoring. Journal of Diabetes Science and Technology, 2013, 7, 4-12.	2.2	11
76	Low-cost gated system for monitoring phosphorescence lifetimes. Review of Scientific Instruments, 2003, 74, 4129-4133.	1.3	10
77	A Low-Cost Fluorescent Sensor for pCO2 Measurements. Chemosensors, 2014, 2, 108-120.	3.6	10
78	Lowâ€cost customizable microscale toolkit for rapid screening and purification of therapeutic proteins. Biotechnology and Bioengineering, 2019, 116, 870-881.	3.3	10
79	Fluorescence-Based Method and a Device for Rapid Detection of Microbial Contamination. PDA Journal of Pharmaceutical Science and Technology, 2014, 68, 164-171.	0.5	9
80	A novel approach toward noninvasive monitoring of transcutaneous CO2. Medical Engineering and Physics, 2014, 36, 136-139.	1.7	9
81	Ex vivo monitoring of protein production in baculovirus-infectedTrichoplusia ni larvae with a GFP-specific optical probe. Biotechnology and Bioengineering, 2003, 83, 241-247.	3.3	8
82	Rapid non-invasive monitoring of baculovirus infection for insect larvae using green fluorescent protein reporter under early-to-late promoter and a GFP-specific optical probe. Process Biochemistry, 2006, 41, 947-950.	3.7	8
83	Low-Cost Plastic Plasmonic Substrates for Operation in Aqueous Environments. Applied Spectroscopy, 2010, 64, 1234-1237.	2.2	8
84	Rapid Covalent Method for Fabrication of Optical pH Sensitive Membranes. Analytical Letters, 2000, 33, 413-423.	1.8	7
85	Charged-Coupled Device (CCD) Detectors for Lab-on-a Chip (LOC) Optical Analysis. Methods in Molecular Biology, 2013, 949, 365-385.	0.9	7
86	Distinguishing between whole cells and cell debris using surface plasmon coupled emission. Biomedical Optics Express, 2018, 9, 1977.	2.9	6
87	Manufacturing biological medicines on demand: Safety and efficacy of granulocyte colonyâ€stimulating factor in a mouse model of total body irradiation. Biotechnology Progress, 2020, 36, e2970.	2.6	6
88	Ratiometric pH Measurements Using LysoSensor DND-192. BMB Reports, 2002, 35, 384-388.	2.4	6
89	Confocal Optical System: A Novel Noninvasive Sensor To Study Mixing. Biotechnology Progress, 2005, 21, 1531-1536.	2.6	5
90	Economical wireless optical ratiometric pH sensor. Measurement Science and Technology, 2009, 20, 045202.	2.6	5

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91	Rapid Detection of Microbial Contamination Using a Microfluidic Device. Methods in Molecular Biology, 2017, 1571, 287-299.	0.9	5
92	Micro-radar wearable respiration monitor. , 2016, , .		4
93	Rapid Ultrasensitive and High-Throughput Bioburden Detection: Microfluidics and Instrumentation. Analytical Chemistry, 2022, 94, 8683-8692.	6.5	4
94	Optical sensor for rapid microbial detection. Proceedings of SPIE, 2016, , .	0.8	3
95	Photodiode-Based Detection System for Biosensors. Methods in Molecular Biology, 2009, 503, 307-323.	0.9	2
96	Spacer and Cavity Engineering on Low-cost Plastic Substrates for 100-Fold Enhancements in Metal-Dielectric-Metal-Based Directional Fluorescence Emission. Plasmonics, 2019, 14, 731-736.	3.4	2
97	A Cell-Free Protein Expression System Derived from Human Primary Peripheral Blood Mononuclear Cells. ACS Synthetic Biology, 2020, 9, 2188-2196.	3.8	2
98	Dual-emitting biosensors for glucose and glutamine from genertically engineered E. coli binding proteins. , 2003, , .		1
99	Non-Invasive Optical Sensor Based Approaches for Monitoring Virus Culture to Minimize BSL3 Laboratory Entry. Sensors, 2015, 15, 14864-14870.	3.8	1
100	Fluorescence-Based Sensors for Bioprocess Monitoring. , 2005, , 333-349.		1
101	Energy transfer-based biosensing of protease activity measured using an electroluminescent platform. Proceedings of SPIE, 2009, , .	0.8	0
102	Universal optical platform for monitoring of bioprocess variables. , 2015, , .		0