Euiwon Bae

List of Publications by Year
in descending order

64 papers	1,287 citations	361413 20 h-index	361022 35 g-index
66 all docs	66 docs citations	66 times ranked	994 citing authors

#	Article	IF	Citations
1	Label-free detection of multiple bacterial pathogens using light-scattering sensor. Biosensors and Bioelectronics, 2009, 24, 1685-1692.	10.1	134
2	Optical forward-scattering for detection of Listeria monocytogenes and other Listeria species. Biosensors and Bioelectronics, 2007, 22, 1664-1671.	10.1	125
3	Smartphone-based colorimetric analysis for detection of saliva alcohol concentration. Applied Optics, 2015, 54, 9183.	2.1	93
4	Colorimetric analysis of salivaâ€“alcohol test strips by smartphone-based instruments using machine-learning algorithms. Applied Optics, 2017, 56, 84.	2.1	79
5	Smartphone-based low light detection for bioluminescence application. Scientific Reports, 2017, 7, 40203.	3.3	65
6	Biophysical modeling of forward scattering from bacterial colonies using scalar diffraction theory. Applied Optics, 2007, 46, 3639.	2.1	55
7	Six-degree-of-freedom displacement measurement system using a diffraction grating. Review of Scientific Instruments, 2000, 71, 3214-3219.	1.3	50
8	Lightâ€•scattering sensor for realâ€•time identification of <i><scp>V</scp>ibrio parahaemolyticus</i>, <i><scp>V</scp>ibrio vulnificus</i> and <i><scp>V</scp>ibrio cholerae</i> colonies on solid agar plate. Microbial Biotechnology, 2012, 5, 607-620.	4.2	48
9	Laser Optical Sensor, a Label-Free On-Plate Salmonella enterica Colony Detection Tool. MBio, 2014, 5, e01019-13.	4.1	48
10	Light Scattering Sensor for Direct Identification of Colonies of Escherichia coli Serogroups O26, O45, O103, O111, O121, O145 and O157. PLoS ONE, 2014, 9, e105272.	2.5	46
11	Smartphone-based lateral flow imaging system for detection of food-borne bacteria E.coli O157:H7. Journal of Microbiological Methods, 2020, 168, 105800.	1.6	43
12	Nano/Micro and Spectroscopic Approaches to Food Pathogen Detection. Annual Review of Analytical Chemistry, 2014, 7, 65-88.	5.4	42
13	Modeling light propagation through bacterial colonies and its correlation with forward scattering patterns. Journal of Biomedical Optics, 2010, 15, 045001.	2.6	35
14	Design methods for six-degree-of-freedom displacement measurement systems using cooperative targets. Precision Engineering, 2002, 26, 99-104.	3.4	29
15	On the sensitivity of forward scattering patterns from bacterial colonies to media composition. Journal of Biophotonics, 2011, 4, 236-243.	2.3	29
16	Labelâ€•free identification of bacterial microcolonies via elastic scattering. Biotechnology and Bioengineering, 2011, 108, 637-644.	3.3	29
17	Analysis of time-resolved scattering from macroscale bacterial colonies. Journal of Biomedical Optics, 2008, 13, 014010.	2.6	24
18	System automation for a bacterial colony detection and identification instrument via forward scattering. Measurement Science and Technology, 2009, 20, 015802.	2.6	23

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19	Label-free, non-invasive light scattering sensor for rapid screening of Bacillus colonies. Journal of Microbiological Methods, 2015, 109, 56-66.	1.6	23
20	Multi-degree-of-freedom displacement measurement system for milli-structures. Measurement Science and Technology, 2001, 12, 1495-1502.	2.6	22
21	Design and Validation of a Portable Machine Learning-Based Electronic Nose. Sensors, 2021, 21, 3923.	3.8	18
22	Design and application of a portable luminometer for bioluminescence detection. Applied Optics, 2020, 59, 801.	1.8	18
23	Virulence Gene-Associated Mutant Bacterial Colonies Generate Differentiating Two-Dimensional Laser Scatter Fingerprints. Applied and Environmental Microbiology, 2016, 82, 3256-3268.	3.1	17
24	Development of a smartphone-based lateral-flow imaging system using machine-learning classifiers for detection of Salmonella spp.. Journal of Microbiological Methods, 2021, 188, 106288.	1.6	17
25	Laser-induced speckle scatter patterns in Bacillus colonies. Frontiers in Microbiology, 2014, 5, 537.	3.5	15
26	Portable bacterial identification system based on elastic light scatter patterns. Journal of Biological Engineering, 2012, 6, 12.	4.7	14
27	Development of a multispectral lightâ€scatter sensor for bacterial colonies. Journal of Biophotonics, 2017, 10, 634-644.	2.3	14
28	Development of an integrated optical analyzer for characterization of growth dynamics of bacterial colonies. Journal of Biophotonics, 2013, 6, 929-937.	2.3	13
29	Detection of E. coli labeled with metal-conjugated antibodies using lateral-flow assay and laser-induced breakdown spectroscopy. Analytical and Bioanalytical Chemistry, 2020, 412, 1291-1301.	3.7	13
30	Scalar diffraction modeling of multispectral forward scatter patterns from bacterial colonies. Optics Express, 2015, 23, 8545.	3.4	11
31	Development of a microbial high-throughput screening instrument based on elastic light scatter patterns. Review of Scientific Instruments, 2012, 83, 044304.	1.3	9
32	Application of sensitivity analysis for the design of six-degree-of-freedom measurement system. Optical Engineering, 2001, 40, 2837.	1.0	7
33	Extending the applicability of the discrete dipole approximation for multi-scale features on surface. Journal of Quantitative Spectroscopy and Radiative Transfer, 2007, 107, 470-478.	2.3	7
34	Using Scattering to Identify Bacterial Pathogens. Optics and Photonics News, 2011, 22, 20.	0.5	6
35	Reflected scatterometry for noninvasive interrogation of bacterial colonies. Journal of Biomedical Optics, 2016, 21, 107004.	2.6	6
36	Current status and future prospects of using advanced computer-based methods to study bacterial colonial morphology. Expert Review of Anti-Infective Therapy, 2016, 14, 207-218.	4.4	6

#	ARTICLE	IF	CITATIONS
37	Generalized spectral light scatter models of diverse bacterial colony morphologies. Journal of Biophotonics, 2019, 12, e201900149.	2.3	6
38	Application of the discrete dipole approximation for dipoles embedded in film. Journal of the Optical Society of America A: Optics and Image Science, and Vision, 2008, 25, 1728.	1.5	5
39	Classification of Arcobacter species using variational autoencoders. , 2019, , .		5
40	Multidimensional motion measurement of a bimorph-type piezoelectric actuator using a diffraction grating target. Review of Scientific Instruments, 2001, 72, 3731-3733.	1.3	4
41	Application of sampling criterion on numerical diffraction from bacterial colonies. Applied Optics, 2011, 50, 2228.	2.1	3
42	Effects of Preparation and Storage of Agar Media on the Sensitivity of Bacterial Forward Scattering Patterns. Open Journal of Applied Biosensor, 2012, 01, 26-35.	1.6	3
43	Noninvasive forward-scattering system for rapid detection, characterization, and identification of Listeria colonies: image-processing and data analysis. , 2006, , .		2
44	Computational analysis and diagonal preconditioning for the discrete dipole approximation on surface. Journal of Quantitative Spectroscopy and Radiative Transfer, 2009, 110, 51-61.	2.3	2
45	Prediction of the light scattering patterns from bacteria colonies by a time-resolved reaction-diffusion model and the scalar diffraction theory. , 2009, , .		2
46	Design of smartphone-based spectrometer to assess fresh meat color. , 2017, , .		2
47	A Portable Spark-Induced Breakdown Spectroscopic (SIBS) Instrument and its Analytical Performance. Applied Spectroscopy, 2019, 73, 698-708.	2.2	2
48	Exploring the Utility of 3-D-printed Laboratory Equipment. Applied Sciences (Switzerland), 2019, 9, 937.	2.5	2
49	Optical multi-channel interrogation instrument for bacterial colony characterization. PLoS ONE, 2021, 16, e0247721.	2.5	2
50	Multiplexed detection of lanthanides using laser-induced breakdown spectroscopy: a survey of data analysis techniques. , 2019, , .		2
51	Phenotypic analysis of bacterial colonies using laser light scatter and pattern-recognition techniques. , 2008, , .		1
52	Development of a real-time system of monitoring bacterial colony growth and registering the forward-scattering pattern. Proceedings of SPIE, 2009, , .	0.8	1
53	A distributed national network for label-free rapid identification of emerging pathogens. , 2011, , .		1
54	Development of a Smartphone-Integrated Reflective Scatterometer for Bacterial Identification. Sensors, 2022, 22, 2646.	3.8	1

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55	Development and optimization of two-dimensional centering algorithm for bacterial rapid detection system using forward scattering. , 2008, , .		0
56	Morphotypic analysis and classification of bacteria and bacterial colonies using laser light-scattering, pattern recognition, and machine-learning system. , 2009, , .		0
57	Characterization of optical properties of bacterial micro-colonies via the comprehensive morphology analyzer. , 2011, , .		0
58	Digital microbiology: detection and classification of unknown bacterial pathogens using a label-free laser light scatter-sensing system. , 2011, , .		0
59	Morphology Characterization of Bacterial Colonies for Predicting Forward Scattering Patterns. , 2010, , .		0
60	Modeling of Multi-spectral Forward Light Scattering Patterns from Bacterial Colonies. , 2012, , .		0
61	Understanding the multispectral forward scatter patterns by diffraction theory. , 2014, , .		0
62	Experimental verification of multispectral forward scatter phenotyping from bacterial colonies. , 2014, , .		0
63	Pico-watt radiant flux detection by smartphone. , 2016, , .		0
64	Development of Multi-modal bacterial rapid detection instrument. , 2018, , .		0