Hadley D Sikes

List of Publications by Year
in descending order

83 papers	2,482 citations	201674 27 h-index	223800 46 g-index
88 all docs	88 docs citations	88 times ranked	2932 citing authors

#	Article	IF	Citations
1	Screening compound libraries for H2O2-mediated cancer therapeutics using a peroxiredoxin-based sensor. Cell Chemical Biology, 2022, 29, 625-635.e3.	5.2	4
2	Finger stick blood test to assess postvaccination <scp>SARSâ€CoV</scp>â€2 neutralizing antibody response against variants. Bioengineering and Translational Medicine, 2022, 7, .	7.1	7
3	Development and translation of a paper-based top readout vertical flow assay for SARS-CoV-2 surveillance. Lab on A Chip, 2022, 22, 1321-1332.	6.0	7
4	Generation of Thermally Stable Affinity Pairs for Sensitive, Specific Immunoassays. Methods in Molecular Biology, 2022, 2491, 417-469.	0.9	0
5	Experimental validation of eosin-mediated photo-redox polymerization mechanism and implications for signal amplification applications. Polymer Chemistry, 2021, 12, 2881-2890.	3.9	2
6	Functional Comparison of Bioactive Cellulose Materials Incorporating Engineered Binding Proteins. ACS Applied Bio Materials, 2021, 4, 392-398.	4.6	4
7	Vertical Flow Cellulose-Based Assays for SARS-CoV-2 Antibody Detection in Human Serum. ACS Sensors, 2021, 6, 1891-1898.	7.8	38
8	Cellular lensing and near infrared fluorescent nanosensor arrays to enable chemical efflux cytometry. Nature Communications, 2021, 12, 3079.	12.8	16
9	Exponential Amplification Using Photoredox Autocatalysis. Journal of the American Chemical Society, 2021, 143, 11544-11553.	13.7	11
10	Developing a SARS-CoV-2 Antigen Test Using Engineered Affinity Proteins. ACS Applied Materials & Interfaces, 2021, 13, 38990-39002.	8.0	12
11	Dual Photoredox Catalysis Strategy for Enhanced Photopolymerization-Based Colorimetric Biodetection. ACS Applied Materials & Interfaces, 2021, 13, 57962-57970.	8.0	0
12	A rapid simple point-of-care assay for the detection of SARS-CoV-2 neutralizing antibodies. Communications Medicine, 2021, 1, .	4.2	23
13	Beyond Epitope Binning: Directed in Vitro Selection of Complementary Pairs of Binding Proteins. ACS Combinatorial Science, 2020, 22, 49-60.	3.8	15
14	Quantification of intracellular H2O2: Methods and significance. , 2020, , 113-124.		0
15	Oxidative pentose phosphate pathway and glucose anaplerosis support maintenance of mitochondrial <scp>NADPH</scp> pool under mitochondrial oxidative stress. Bioengineering and Translational Medicine, 2020, 5, e10184.	7.1	35
16	Kinetic modeling of H2O2 dynamics in the mitochondria of HeLa cells. PLoS Computational Biology, 2020, 16, e1008202.	3.2	21
17	Developing a cell-bound detection system for the screening of oxidase activity using the fluorescent peroxide sensor roGFP2-Orp1. Protein Engineering, Design and Selection, 2020, 33, .	2.1	1
18	Functional comparison of paper-based immunoassays based on antibodies and engineered binding proteins. Analyst, The, 2020, 145, 2515-2519.	3.5	7

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19	Polymerization-Based Amplification for Target-Specific Colorimetric Detection of Amplified Mycobacterium tuberculosis DNA on Cellulose. ACS Sensors, 2020, 5, 308-312.	7.8	22
20	Radical polymerization reactions for amplified biodetection signals. Polymer Chemistry, 2020, 11, 1424-1444.	3.9	47
21	A xenograft and cell line model of SDH-deficient pheochromocytoma derived from Sdhb+/â˜ rats. Endocrine-Related Cancer, 2020, 27, 337-354.	3.1	16
22	A xenograft and cell line model of SDH-deficient pheochromocytoma derived from Sdhb+/â˜ rats. Endocrine-Related Cancer, 2020, 27, X9-X10.	3.1	0
23	Sensitivity and binding kinetics of an ultra-sensitive chemiluminescent enzyme-linked immunosorbent assay at arrays of antibodies. Journal of Immunological Methods, 2019, 474, 112643.	1.4	18
24	Liposome-Enhanced Polymerization-Based Signal Amplification for Highly Sensitive Naked-Eye Biodetection in Paper-Based Sensors. ACS Applied Materials & Interfaces, 2019, 11, 28469-28477.	8.0	19
25	Can Fish and Cell Phones Teach Us about Our Health?. ACS Sensors, 2019, 4, 2566-2570.	7.8	2
26	On the role of N-vinylpyrrolidone in the aqueous radical-initiated copolymerization with PEGDA mediated by eosin Y in the presence of O₂. Polymer Chemistry, 2019, 10, 926-937.	3.9	24
27	Emulsion Agglutination Assay for the Detection of Proteinâ€“Protein Interactions: An Optical Sensor for Zika Virus. ACS Sensors, 2019, 4, 180-184.	7.8	36
28	An examination of critical parameters in hybridizationâ€based epigenotyping using magnetic microparticles. Biotechnology Progress, 2018, 34, 1589-1595.	2.6	1
29	A mathematical analysis of Prx2-STAT3 disulfide exchange rate constants for a bimolecular reaction mechanism. Free Radical Biology and Medicine, 2018, 120, 239-245.	2.9	9
30	Paper-based diagnostics in the antigen-depletion regime: High-density immobilization of rcSso7d-cellulose-binding domain fusion proteins for efficient target capture. Biosensors and Bioelectronics, 2018, 102, 456-463.	10.1	41
31	Engineering hyperthermostable rcSso7d as reporter molecule forin vitrodiagnostic tests. Molecular Systems Design and Engineering, 2018, 3, 877-882.	3.4	14
32	Excitation of Metastable Intermediates in Organic Photoredox Catalysis: Z-Scheme Approach Decreases Catalyst Inactivation. ACS Catalysis, 2018, 8, 6394-6400.	11.2	40
33	A unique model for SDH-deficient GIST: an endocrine-related cancer. Endocrine-Related Cancer, 2018, 25, 943-954.	3.1	11
34	Monitoring the action of redox-directed cancer therapeutics using a human peroxiredoxin-2-based probe. Nature Communications, 2018, 9, 3145.	12.8	41
35	Phenolphthalein-Conjugated Hydrogel Formation under Visible-Light Irradiation for Reducing Variability of Colorimetric Biodetection. ACS Applied Bio Materials, 2018, 1, 216-220.	4.6	11
36	Mitochondrial H2O2 Generation Using a Tunable Chemogenetic Tool To Perturb Redox Homeostasis in Human Cells and Induce Cell Death. ACS Synthetic Biology, 2018, 7, 2037-2044.	3.8	17

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37	Improved Ordering in Low Molecular Weight Proteinâ€“Polymer Conjugates Through Oligomerization of the Protein Block. Biomacromolecules, 2018, 19, 3814-3824.	5.4	17
38	Design Principles for Enhancing Sensitivity in Paper-Based Diagnostics via Large-Volume Processing. Analytical Chemistry, 2018, 90, 9472-9479.	6.5	12
39	Low-cost plug and play photochemistry reactor. HardwareX, 2018, 3, 1-9.	2.2	8
40	Using nanobiotechnology to increase the prevalence of epigenotyping assays in precision medicine. Wiley Interdisciplinary Reviews: Nanomedicine and Nanobiotechnology, 2017, 9, e1407.	6.1	3
41	Detection of Biomarkers of Periodontal Disease in Human Saliva Using Stabilized, Vertical Flow Immunoassays. ACS Sensors, 2017, 2, 1589-1593.	7.8	37
42	Scaffolding H2O2 signaling. Nature Chemical Biology, 2017, 13, 818-819.	8.0	4
43	The Impact of Continuous Oxygen Flux in a Thin Film Photopolymerization Reaction with Peroxyâ€Mediated Regeneration of Initiator. Macromolecular Theory and Simulations, 2016, 25, 229-237.	1.4	3
44	Portable, Constrictionâ€“Expansion Blood Plasma Separation and Polymerization-Based Malaria Detection. Analytical Chemistry, 2016, 88, 7627-7632.	6.5	15
45	Activity-based assessment of an engineered hyperthermophilic protein as a capture agent in paper-based diagnostic tests. Molecular Systems Design and Engineering, 2016, 1, 377-381.	3.4	27
46	Engineering affinity agents for the detection of hemi-methylated CpG sites in DNA. Molecular Systems Design and Engineering, 2016, 1, 273-277.	3.4	8
47	Modulating and Measuring Intracellular H₂O₂ Using Genetically Encoded Tools to Study Its Toxicity to Human Cells. ACS Synthetic Biology, 2016, 5, 1389-1395.	3.8	26
48	Using photo-initiated polymerization reactions to detect molecular recognition. Chemical Society Reviews, 2016, 45, 532-545.	38.1	49
49	A Method for Designing Instrument-Free Quantitative Immunoassays. Analytical Chemistry, 2016, 88, 3194-3202.	6.5	20
50	Using Sensors and Generators of H₂O₂to Elucidate the Toxicity Mechanism of Piperlongumine and Phenethyl Isothiocyanate. Antioxidants and Redox Signaling, 2016, 24, 924-938.	5.4	20
51	Assessment of colorimetric amplification methods in a paper-based immunoassay for diagnosis of malaria. Lab on A Chip, 2016, 16, 1374-1382.	6.0	76
52	A reaction-diffusion model of cytosolic hydrogen peroxide. Free Radical Biology and Medicine, 2016, 90, 85-90.	2.9	48
53	UV-Vis/FT-NIR in situ monitoring of visible-light induced polymerization of PEGDA hydrogels initiated by eosin/triethanolamine/O₂. Polymer Chemistry, 2016, 7, 592-602.	3.9	28
54	Addressing Barriers to the Development and Adoption of Rapid Diagnostic Tests in Global Health. Nanobiomedicine, 2015, 2, 6.	5.7	48

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55	Insights into electron leakage in the reaction cycle of cytochrome P450 BM3 revealed by kinetic modeling and mutagenesis. Protein Science, 2015, 24, 1874-1883.	7.6	11
56	Investigation of dendrimers functionalized with eosin as macrophotoinitiators for polymerization-based signal amplification reactions. RSC Advances, 2015, 5, 15652-15659.	3.6	21
57	Use of a genetically encoded hydrogen peroxide sensor for whole cell screening of enzyme activity. Protein Engineering, Design and Selection, 2015, 28, 79-83.	2.1	14
58	A quantitative analysis of peroxy-mediated cyclic regeneration ofÂeosin under oxygen-rich photopolymerization conditions. Polymer, 2015, 69, 169-177.	3.8	13
59	Analysis of the lifetime and spatial localization of hydrogen peroxide generated in the cytosol using a reduced kinetic model. Free Radical Biology and Medicine, 2015, 89, 47-53.	2.9	62
60	Editorial overview: Analytical biotechnology. Current Opinion in Biotechnology, 2015, 31, iv-vi.	6.6	0
61	Characterization and directed evolution of a methyl-binding domain protein for high-sensitivity DNA methylation analysis. Protein Engineering, Design and Selection, 2015, 28, 543-551.	2.1	11
62	Staged inertial microfluidic focusing for complex fluid enrichment. RSC Advances, 2015, 5, 53857-53864.	3.6	19
63	Interpreting Heterogeneity in Response of Cells Expressing a Fluorescent Hydrogen Peroxide Biosensor. Biophysical Journal, 2015, 109, 2148-2158.	0.5	12
64	Polymerization-based signal amplification for paper-based immunoassays. Lab on A Chip, 2015, 15, 655-659.	6.0	98
65	Balancing the Initiation and Molecular Recognition Capabilities of Eosin Macroinitiators of Polymerizationâ€Based Signal Amplification Reactions. Macromolecular Rapid Communications, 2014, 35, 981-986.	3.9	16
66	Evaluating the sensitivity of hybridization-based epigenotyping using a methyl binding domain protein. Analyst, The, 2014, 139, 3695-3701.	3.5	23
67	Quantifying intracellular hydrogen peroxide perturbations in terms of concentration. Redox Biology, 2014, 2, 955-962.	9.0	114
68	In-depth characterization of the fluorescent signal of HyPer, a probe for hydrogen peroxide, in bacteria exposed to external oxidative stress. Journal of Microbiological Methods, 2014, 106, 33-39.	1.6	11
69	Impact of Dissociation Constant on the Detection Sensitivity of Polymerization-Based Signal Amplification Reactions. Analytical Chemistry, 2013, 85, 8055-8060.	6.5	20
70	Polymerization-based signal amplification under ambient conditions with thirty-five second reaction times. Lab on A Chip, 2012, 12, 4055.	6.0	31
71	Functional heterologous expression and purification of a mammalian methyl-CpG binding domain in suitable yield for DNA methylation profiling assays. Protein Expression and Purification, 2012, 82, 332-338.	1.3	4
72	Systematic Study of Fluorescein-Functionalized Macrophotoinitiators for Colorimetric Bioassays. Biomacromolecules, 2012, 13, 1136-1143.	5.4	34

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73	Antigen detection using polymerization-based amplification. Lab on A Chip, 2009, 9, 653-656.	6.0	43
74	Using polymeric materials to generate an amplified response to molecular recognition events. Nature Materials, 2008, 7, 52-56.	27.5	99
75	Visual Detection of Labeled Oligonucleotides Using Visible-Light-Polymerization-Based Amplification. Biomacromolecules, 2008, 9, 355-362.	5.4	58
76	Interfacial Electron-Transfer Kinetics of Ferrocene through Oligophenyleneethynylene Bridges Attached to Gold Electrodes as Constituents of Self-Assembled Monolayers:Â Observation of a Nonmonotonic Distance Dependence. Journal of the American Chemical Society, 2004, 126, 14620-14630.	13.7	119
77	Photoelectron Spectroscopy to Probe the Mechanism of Electron Transfer through Oligo(phenylene) Tj ETQq1 1 0.784314 rgBT /Over	2.6	15
78	Synthesis of Ferrocenethiols Containing Oligo(phenylenevinylene) Bridges and Their Characterization on Gold Electrodes. Journal of the American Chemical Society, 2001, 123, 8033-8038.	13.7	78
79	Rapid Electron Tunneling Through Oligophenylenevinylene Bridges. Science, 2001, 291, 1519-1523.	12.6	330
80	Kinetics of Self-Assembled Monolayer Growth Explored via Submonolayer Coverage of Incomplete Films. Journal of Physical Chemistry B, 1997, 101, 7535-7541.	2.6	60
81	A Temperature-Dependent Two-Dimensional Condensation Transition during Langmuirâ^'Blodgett Deposition. Langmuir, 1997, 13, 4704-4709.	3.5	45
82	Two-Dimensional Melting of an Anisotropic Crystal Observed at the Molecular Level. Science, 1997, 278, 1604-1607.	12.6	54
83	Pattern Formation in a Substrate-Induced Phase Transition during Langmuirâ^'Blodgett Transfer. The Journal of Physical Chemistry, 1996, 100, 9093-9097.	2.9	44