

Hadley D Sikes

List of Publications by Year in descending order

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83
papers

2,482
citations

201385

27
h-index

223531

46
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88
all docs

88
docs citations

88
times ranked

2932
citing authors

#	ARTICLE	IF	CITATIONS
1	Rapid Electron Tunneling Through Oligophenylenevinylene Bridges. <i>Science</i> , 2001, 291, 1519-1523.	6.0	330
2	Interfacial Electron-Transfer Kinetics of Ferrocene through Oligophenyleneethynylene Bridges Attached to Gold Electrodes as Constituents of Self-Assembled Monolayers: A Observation of a Nonmonotonic Distance Dependence. <i>Journal of the American Chemical Society</i> , 2004, 126, 14620-14630.	6.6	119
3	Quantifying intracellular hydrogen peroxide perturbations in terms of concentration. <i>Redox Biology</i> , 2014, 2, 955-962.	3.9	114
4	Using polymeric materials to generate an amplified response to molecular recognition events. <i>Nature Materials</i> , 2008, 7, 52-56.	13.3	99
5	Polymerization-based signal amplification for paper-based immunoassays. <i>Lab on A Chip</i> , 2015, 15, 655-659.	3.1	98
6	Synthesis of Ferrocenethiols Containing Oligo(phenylenevinylene) Bridges and Their Characterization on Gold Electrodes. <i>Journal of the American Chemical Society</i> , 2001, 123, 8033-8038.	6.6	78
7	Assessment of colorimetric amplification methods in a paper-based immunoassay for diagnosis of malaria. <i>Lab on A Chip</i> , 2016, 16, 1374-1382.	3.1	76
8	Analysis of the lifetime and spatial localization of hydrogen peroxide generated in the cytosol using a reduced kinetic model. <i>Free Radical Biology and Medicine</i> , 2015, 89, 47-53.	1.3	62
9	Kinetics of Self-Assembled Monolayer Growth Explored via Submonolayer Coverage of Incomplete Films. <i>Journal of Physical Chemistry B</i> , 1997, 101, 7535-7541.	1.2	60
10	Visual Detection of Labeled Oligonucleotides Using Visible-Light-Polymerization-Based Amplification. <i>Biomacromolecules</i> , 2008, 9, 355-362.	2.6	58
11	Two-Dimensional Melting of an Anisotropic Crystal Observed at the Molecular Level. <i>Science</i> , 1997, 278, 1604-1607.	6.0	54
12	Using photo-initiated polymerization reactions to detect molecular recognition. <i>Chemical Society Reviews</i> , 2016, 45, 532-545.	18.7	49
13	Addressing Barriers to the Development and Adoption of Rapid Diagnostic Tests in Global Health. <i>Nanobiomedicine</i> , 2015, 2, 6.	4.4	48
14	A reaction-diffusion model of cytosolic hydrogen peroxide. <i>Free Radical Biology and Medicine</i> , 2016, 90, 85-90.	1.3	48
15	Radical polymerization reactions for amplified biodetection signals. <i>Polymer Chemistry</i> , 2020, 11, 1424-1444.	1.9	47
16	A Temperature-Dependent Two-Dimensional Condensation Transition during Langmuir-Blodgett Deposition. <i>Langmuir</i> , 1997, 13, 4704-4709.	1.6	45
17	Pattern Formation in a Substrate-Induced Phase Transition during Langmuir-Blodgett Transfer. <i>The Journal of Physical Chemistry</i> , 1996, 100, 9093-9097.	2.9	44
18	Antigen detection using polymerization-based amplification. <i>Lab on A Chip</i> , 2009, 9, 653-656.	3.1	43

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19	Paper-based diagnostics in the antigen-depletion regime: High-density immobilization of rcSso7d-cellulose-binding domain fusion proteins for efficient target capture. <i>Biosensors and Bioelectronics</i> , 2018, 102, 456-463.	5.3	41
20	Monitoring the action of redox-directed cancer therapeutics using a human peroxiredoxin-2-based probe. <i>Nature Communications</i> , 2018, 9, 3145.	5.8	41
21	Excitation of Metastable Intermediates in Organic Photoredox Catalysis: Z-Scheme Approach Decreases Catalyst Inactivation. <i>ACS Catalysis</i> , 2018, 8, 6394-6400.	5.5	40
22	Vertical Flow Cellulose-Based Assays for SARS-CoV-2 Antibody Detection in Human Serum. <i>ACS Sensors</i> , 2021, 6, 1891-1898.	4.0	38
23	Detection of Biomarkers of Periodontal Disease in Human Saliva Using Stabilized, Vertical Flow Immunoassays. <i>ACS Sensors</i> , 2017, 2, 1589-1593.	4.0	37
24	Emulsion Agglutination Assay for the Detection of Protein-Protein Interactions: An Optical Sensor for Zika Virus. <i>ACS Sensors</i> , 2019, 4, 180-184.	4.0	36
25	Oxidative pentose phosphate pathway and glucose anaplerosis support maintenance of mitochondrial NADPH pool under mitochondrial oxidative stress. <i>Bioengineering and Translational Medicine</i> , 2020, 5, e10184.	3.9	35
26	Systematic Study of Fluorescein-Functionalized Macrophotoinitiators for Colorimetric Bioassays. <i>Biomacromolecules</i> , 2012, 13, 1136-1143.	2.6	34
27	Polymerization-based signal amplification under ambient conditions with thirty-five second reaction times. <i>Lab on A Chip</i> , 2012, 12, 4055.	3.1	31
28	UV-Vis/FT-NIR in situ monitoring of visible-light induced polymerization of PEGDA hydrogels initiated by eosin/triethanolamine/O ₂ . <i>Polymer Chemistry</i> , 2016, 7, 592-602.	1.9	28
29	Activity-based assessment of an engineered hyperthermophilic protein as a capture agent in paper-based diagnostic tests. <i>Molecular Systems Design and Engineering</i> , 2016, 1, 377-381.	1.7	27
30	Modulating and Measuring Intracellular H ₂ O ₂ Using Genetically Encoded Tools to Study Its Toxicity to Human Cells. <i>ACS Synthetic Biology</i> , 2016, 5, 1389-1395.	1.9	26
31	On the role of N-vinylpyrrolidone in the aqueous radical-initiated copolymerization with PEGDA mediated by eosin Y in the presence of O ₂ . <i>Polymer Chemistry</i> , 2019, 10, 926-937.	1.9	24
32	Evaluating the sensitivity of hybridization-based epigenotyping using a methyl binding domain protein. <i>Analyst</i> , 2014, 139, 3695-3701.	1.7	23
33	A rapid simple point-of-care assay for the detection of SARS-CoV-2 neutralizing antibodies. <i>Communications Medicine</i> , 2021, 1, .	1.9	23
34	Polymerization-Based Amplification for Target-Specific Colorimetric Detection of Amplified <i>Mycobacterium tuberculosis</i> DNA on Cellulose. <i>ACS Sensors</i> , 2020, 5, 308-312.	4.0	22
35	Investigation of dendrimers functionalized with eosin as macrophotoinitiators for polymerization-based signal amplification reactions. <i>RSC Advances</i> , 2015, 5, 15652-15659.	1.7	21
36	Kinetic modeling of H ₂ O ₂ dynamics in the mitochondria of HeLa cells. <i>PLoS Computational Biology</i> , 2020, 16, e1008202.	1.5	21

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37	Impact of Dissociation Constant on the Detection Sensitivity of Polymerization-Based Signal Amplification Reactions. <i>Analytical Chemistry</i> , 2013, 85, 8055-8060.	3.2	20
38	A Method for Designing Instrument-Free Quantitative Immunoassays. <i>Analytical Chemistry</i> , 2016, 88, 3194-3202.	3.2	20
39	Using Sensors and Generators of H ₂ O ₂ to Elucidate the Toxicity Mechanism of Piperlongumine and Phenethyl Isothiocyanate. <i>Antioxidants and Redox Signaling</i> , 2016, 24, 924-938.	2.5	20
40	Staged inertial microfluidic focusing for complex fluid enrichment. <i>RSC Advances</i> , 2015, 5, 53857-53864.	1.7	19
41	Liposome-Enhanced Polymerization-Based Signal Amplification for Highly Sensitive Naked-Eye Biodetection in Paper-Based Sensors. <i>ACS Applied Materials & Interfaces</i> , 2019, 11, 28469-28477.	4.0	19
42	Sensitivity and binding kinetics of an ultra-sensitive chemiluminescent enzyme-linked immunosorbent assay at arrays of antibodies. <i>Journal of Immunological Methods</i> , 2019, 474, 112643.	0.6	18
43	Mitochondrial H ₂ O ₂ Generation Using a Tunable Chemogenetic Tool To Perturb Redox Homeostasis in Human Cells and Induce Cell Death. <i>ACS Synthetic Biology</i> , 2018, 7, 2037-2044.	1.9	17
44	Improved Ordering in Low Molecular Weight Protein-Polymer Conjugates Through Oligomerization of the Protein Block. <i>Biomacromolecules</i> , 2018, 19, 3814-3824.	2.6	17
45	Balancing the Initiation and Molecular Recognition Capabilities of Eosin Macroinitiators of Polymerization-Based Signal Amplification Reactions. <i>Macromolecular Rapid Communications</i> , 2014, 35, 981-986.	2.0	16
46	Cellular lensing and near infrared fluorescent nanosensor arrays to enable chemical efflux cytometry. <i>Nature Communications</i> , 2021, 12, 3079.	5.8	16
47	A xenograft and cell line model of SDH-deficient pheochromocytoma derived from Sdhb ^{+/Δ} rats. <i>Endocrine-Related Cancer</i> , 2020, 27, 337-354.	1.6	16
48	Photoelectron Spectroscopy to Probe the Mechanism of Electron Transfer through Oligo(phenylene) Tj ETQqO O O rgBT /Overlock 10 Tf	1.2	15
49	Portable, Constriction-Expansion Blood Plasma Separation and Polymerization-Based Malaria Detection. <i>Analytical Chemistry</i> , 2016, 88, 7627-7632.	3.2	15
50	Beyond Epitope Binning: Directed <i>in Vitro</i> Selection of Complementary Pairs of Binding Proteins. <i>ACS Combinatorial Science</i> , 2020, 22, 49-60.	3.8	15
51	Use of a genetically encoded hydrogen peroxide sensor for whole cell screening of enzyme activity. <i>Protein Engineering, Design and Selection</i> , 2015, 28, 79-83.	1.0	14
52	Engineering hyperthermostable rSso7d as reporter molecule for <i>in vitro</i> diagnostic tests. <i>Molecular Systems Design and Engineering</i> , 2018, 3, 877-882.	1.7	14
53	A quantitative analysis of peroxy-mediated cyclic regeneration of Eosin under oxygen-rich photopolymerization conditions. <i>Polymer</i> , 2015, 69, 169-177.	1.8	13
54	Interpreting Heterogeneity in Response of Cells Expressing a Fluorescent Hydrogen Peroxide Biosensor. <i>Biophysical Journal</i> , 2015, 109, 2148-2158.	0.2	12

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55	Design Principles for Enhancing Sensitivity in Paper-Based Diagnostics via Large-Volume Processing. <i>Analytical Chemistry</i> , 2018, 90, 9472-9479.	3.2	12
56	Developing a SARS-CoV-2 Antigen Test Using Engineered Affinity Proteins. <i>ACS Applied Materials & Interfaces</i> , 2021, 13, 38990-39002.	4.0	12
57	In-depth characterization of the fluorescent signal of HyPer, a probe for hydrogen peroxide, in bacteria exposed to external oxidative stress. <i>Journal of Microbiological Methods</i> , 2014, 106, 33-39.	0.7	11
58	Insights into electron leakage in the reaction cycle of cytochrome P450 BM3 revealed by kinetic modeling and mutagenesis. <i>Protein Science</i> , 2015, 24, 1874-1883.	3.1	11
59	Characterization and directed evolution of a methyl-binding domain protein for high-sensitivity DNA methylation analysis. <i>Protein Engineering, Design and Selection</i> , 2015, 28, 543-551.	1.0	11
60	A unique model for SDH-deficient GIST: an endocrine-related cancer. <i>Endocrine-Related Cancer</i> , 2018, 25, 943-954.	1.6	11
61	Phenolphthalein-Conjugated Hydrogel Formation under Visible-Light Irradiation for Reducing Variability of Colorimetric Biodetection. <i>ACS Applied Bio Materials</i> , 2018, 1, 216-220.	2.3	11
62	Exponential Amplification Using Photoredox Autocatalysis. <i>Journal of the American Chemical Society</i> , 2021, 143, 11544-11553.	6.6	11
63	A mathematical analysis of Prx2-STAT3 disulfide exchange rate constants for a bimolecular reaction mechanism. <i>Free Radical Biology and Medicine</i> , 2018, 120, 239-245.	1.3	9
64	Engineering affinity agents for the detection of hemi-methylated CpG sites in DNA. <i>Molecular Systems Design and Engineering</i> , 2016, 1, 273-277.	1.7	8
65	Low-cost plug and play photochemistry reactor. <i>HardwareX</i> , 2018, 3, 1-9.	1.1	8
66	Functional comparison of paper-based immunoassays based on antibodies and engineered binding proteins. <i>Analyst</i> , The, 2020, 145, 2515-2519.	1.7	7
67	Finger stick blood test to assess postvaccination SARS-CoV-2 neutralizing antibody response against variants. <i>Bioengineering and Translational Medicine</i> , 2022, 7, .	3.9	7
68	Development and translation of a paper-based top readout vertical flow assay for SARS-CoV-2 surveillance. <i>Lab on A Chip</i> , 2022, 22, 1321-1332.	3.1	7
69	Functional heterologous expression and purification of a mammalian methyl-CpG binding domain in suitable yield for DNA methylation profiling assays. <i>Protein Expression and Purification</i> , 2012, 82, 332-338.	0.6	4
70	Scaffolding H ₂ O ₂ signaling. <i>Nature Chemical Biology</i> , 2017, 13, 818-819.	3.9	4
71	Functional Comparison of Bioactive Cellulose Materials Incorporating Engineered Binding Proteins. <i>ACS Applied Bio Materials</i> , 2021, 4, 392-398.	2.3	4
72	Screening compound libraries for H ₂ O ₂ -mediated cancer therapeutics using a peroxiredoxin-based sensor. <i>Cell Chemical Biology</i> , 2022, 29, 625-635.e3.	2.5	4

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73	The Impact of Continuous Oxygen Flux in a Thin Film Photopolymerization Reaction with Peroxy-Mediated Regeneration of Initiator. <i>Macromolecular Theory and Simulations</i> , 2016, 25, 229-237.	0.6	3
74	Using nanobiotechnology to increase the prevalence of epigenotyping assays in precision medicine. <i>Wiley Interdisciplinary Reviews: Nanomedicine and Nanobiotechnology</i> , 2017, 9, e1407.	3.3	3
75	Can Fish and Cell Phones Teach Us about Our Health?. <i>ACS Sensors</i> , 2019, 4, 2566-2570.	4.0	2
76	Experimental validation of eosin-mediated photo-redox polymerization mechanism and implications for signal amplification applications. <i>Polymer Chemistry</i> , 2021, 12, 2881-2890.	1.9	2
77	An examination of critical parameters in hybridization-based epigenotyping using magnetic microparticles. <i>Biotechnology Progress</i> , 2018, 34, 1589-1595.	1.3	1
78	Developing a cell-bound detection system for the screening of oxidase activity using the fluorescent peroxide sensor roGFP2-Orp1. <i>Protein Engineering, Design and Selection</i> , 2020, 33, .	1.0	1
79	Editorial overview: Analytical biotechnology. <i>Current Opinion in Biotechnology</i> , 2015, 31, iv-vi.	3.3	0
80	Quantification of intracellular H ₂ O ₂ : Methods and significance. , 2020, , 113-124.		0
81	Dual Photoredox Catalysis Strategy for Enhanced Photopolymerization-Based Colorimetric Biodetection. <i>ACS Applied Materials & Interfaces</i> , 2021, 13, 57962-57970.	4.0	0
82	A xenograft and cell line model of SDH-deficient pheochromocytoma derived from Sdhb+/+ rats. <i>Endocrine-Related Cancer</i> , 2020, 27, X9-X10.	1.6	0
83	Generation of Thermally Stable Affinity Pairs for Sensitive, Specific Immunoassays. <i>Methods in Molecular Biology</i> , 2022, 2491, 417-469.	0.4	0