

Hadley D Sikes

List of Publications by Year in Descending Order

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

80
papers

1,985
citations

24
h-index

42
g-index

88
ext. papers

2,251
ext. citations

8.3
avg, IF

5.37
L-index

#	Paper	IF	Citations
80	Development and translation of a paper-based top readout vertical flow assay for SARS-CoV-2 surveillance.. <i>Lab on A Chip</i> , 2022 ,	7.2	1
79	Generation of Thermally Stable Affinity Pairs for Sensitive, Specific Immunoassays.. <i>Methods in Molecular Biology</i> , 2022 , 2491, 417-469	1.4	
78	Dual Photoredox Catalysis Strategy for Enhanced Photopolymerization-Based Colorimetric Biodetection. <i>ACS Applied Materials & Interfaces</i> , 2021 , 13, 57962-57970	9.5	
77	A rapid simple point-of-care assay for the detection of SARS-CoV-2 neutralizing antibodies. <i>Communications Medicine</i> , 2021 , 1,		1
76	Developing a SARS-CoV-2 Antigen Test Using Engineered Affinity Proteins. <i>ChemRxiv</i> , 2021 ,	4.4	2
75	Vertical Flow Cellulose-Based Assays for SARS-CoV-2 Antibody Detection in Human Serum. <i>ACS Sensors</i> , 2021 , 6, 1891-1898	9.2	17
74	Cellular lensing and near infrared fluorescent nanosensor arrays to enable chemical efflux cytometry. <i>Nature Communications</i> , 2021 , 12, 3079	17.4	4
73	Exponential Amplification Using Photoredox Autocatalysis. <i>Journal of the American Chemical Society</i> , 2021 , 143, 11544-11553	16.4	4
72	Experimental validation of eosin-mediated photo-redox polymerization mechanism and implications for signal amplification applications. <i>Polymer Chemistry</i> , 2021 , 12, 2881-2890	4.9	2
71	Functional Comparison of Bioactive Cellulose Materials Incorporating Engineered Binding Proteins.. <i>ACS Applied Bio Materials</i> , 2021 , 4, 392-398	4.1	2
70	Developing a SARS-CoV-2 Antigen Test Using Engineered Affinity Proteins. <i>ACS Applied Materials & Interfaces</i> , 2021 , 13, 38990-39002	9.5	3
69	Functional comparison of paper-based immunoassays based on antibodies and engineered binding proteins. <i>Analyst, The</i> , 2020 , 145, 2515-2519	5	4
68	Polymerization-Based Amplification for Target-Specific Colorimetric Detection of Amplified DNA on Cellulose. <i>ACS Sensors</i> , 2020 , 5, 308-312	9.2	13
67	A xenograft and cell line model of SDH-deficient pheochromocytoma derived from Sdhb+/- rats. <i>Endocrine-Related Cancer</i> , 2020 , 27, 337-354	5.7	9
66	A xenograft and cell line model of SDH-deficient pheochromocytoma derived from Sdhb+/Δrats. <i>Endocrine-Related Cancer</i> , 2020 , 27, X9-X10	5.7	
65	Radical polymerization reactions for amplified biodetection signals. <i>Polymer Chemistry</i> , 2020 , 11, 1424-1444	4.9	30
64	Beyond Epitope Binning: Directed Selection of Complementary Pairs of Binding Proteins. <i>ACS Combinatorial Science</i> , 2020 , 22, 49-60	3.9	9

63 Quantification of intracellular H₂O₂: Methods and significance **2020**, 113-124

62 Oxidative pentose phosphate pathway and glucose anaplerosis support maintenance of mitochondrial NADPH pool under mitochondrial oxidative stress. *Bioengineering and Translational Medicine*, **2020**, 5, e10184 14.8 13

61 Kinetic modeling of H₂O₂ dynamics in the mitochondria of HeLa cells. *PLoS Computational Biology*, **2020**, 16, e1008202 5 7

60 Can Fish and Cell Phones Teach Us about Our Health?. *ACS Sensors*, **2019**, 4, 2566-2570 9.2 1

59 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 4.9 18

58 Sensitivity and binding kinetics of an ultra-sensitive chemiluminescent enzyme-linked immunosorbent assay at arrays of antibodies. *Journal of Immunological Methods*, **2019**, 474, 112643 2.5 11

57 Liposome-Enhanced Polymerization-Based Signal Amplification for Highly Sensitive Naked-Eye Biodetection in Paper-Based Sensors. *ACS Applied Materials & Interfaces*, **2019**, 11, 28469-28477 9.5 14

56 Emulsion Agglutination Assay for the Detection of Protein-Protein Interactions: An Optical Sensor for Zika Virus. *ACS Sensors*, **2019**, 4, 180-184 9.2 26

55 An examination of critical parameters in hybridization-based epigenotyping using magnetic microparticles. *Biotechnology Progress*, **2018**, 34, 1589-1595 2.8 1

54 A mathematical analysis of Prx2-STAT3 disulfide exchange rate constants for a bimolecular reaction mechanism. *Free Radical Biology and Medicine*, **2018**, 120, 239-245 7.8 5

53 Monitoring the action of redox-directed cancer therapeutics using a human peroxiredoxin-2-based probe. *Nature Communications*, **2018**, 9, 3145 17.4 30

52 Phenolphthalein-Conjugated Hydrogel Formation under Visible-Light Irradiation for Reducing Variability of Colorimetric Biodetection.. *ACS Applied Bio Materials*, **2018**, 1, 216-220 4.1 7

51 Mitochondrial HO Generation Using a Tunable Chemogenetic Tool To Perturb Redox Homeostasis in Human Cells and Induce Cell Death. *ACS Synthetic Biology*, **2018**, 7, 2037-2044 5.7 14

50 Improved Ordering in Low Molecular Weight Protein-Polymer Conjugates Through Oligomerization of the Protein Block. *Biomacromolecules*, **2018**, 19, 3814-3824 6.9 11

49 Design Principles for Enhancing Sensitivity in Paper-Based Diagnostics via Large-Volume Processing. *Analytical Chemistry*, **2018**, 90, 9472-9479 7.8 9

48 Low-cost plug and play photochemistry reactor. *HardwareX*, **2018**, 3, 1-9 2.7 7

47 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 11.8 23

46 Engineering hyperthermostable rcSso7d as reporter molecule for in vitro diagnostic tests. *Molecular Systems Design and Engineering*, **2018**, 3, 877-882 4.6 9

45	Excitation of Metastable Intermediates in Organic Photoredox Catalysis: Z-Scheme Approach Decreases Catalyst Inactivation. <i>ACS Catalysis</i> , 2018 , 8, 6394-6400	13.1	36
44	A unique model for SDH-deficient GIST: an endocrine-related cancer. <i>Endocrine-Related Cancer</i> , 2018 , 25, 943-954	5.7	9
43	Using nanobiotechnology to increase the prevalence of epigenotyping assays in precision medicine. <i>Wiley Interdisciplinary Reviews: Nanomedicine and Nanobiotechnology</i> , 2017 , 9, e1407	9.2	2
42	Detection of Biomarkers of Periodontal Disease in Human Saliva Using Stabilized, Vertical Flow Immunoassays. <i>ACS Sensors</i> , 2017 , 2, 1589-1593	9.2	25
41	Redox regulation: Scaffolding HO signaling. <i>Nature Chemical Biology</i> , 2017 , 13, 818-819	11.7	4
40	Engineering affinity agents for the detection of hemi-methylated CpG sites in DNA. <i>Molecular Systems Design and Engineering</i> , 2016 , 1, 273-277	4.6	2
39	Modulating and Measuring Intracellular HO Using Genetically Encoded Tools to Study Its Toxicity to Human Cells. <i>ACS Synthetic Biology</i> , 2016 , 5, 1389-1395	5.7	21
38	Using photo-initiated polymerization reactions to detect molecular recognition. <i>Chemical Society Reviews</i> , 2016 , 45, 532-45	58.5	37
37	A Method for Designing Instrument-Free Quantitative Immunoassays. <i>Analytical Chemistry</i> , 2016 , 88, 3194-202	7.8	20
36	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, 924-38	8.4	15
35	Assessment of colorimetric amplification methods in a paper-based immunoassay for diagnosis of malaria. <i>Lab on A Chip</i> , 2016 , 16, 1374-82	7.2	63
34	A reaction-diffusion model of cytosolic hydrogen peroxide. <i>Free Radical Biology and Medicine</i> , 2016 , 90, 85-90	7.8	33
33	UV-Vis/FT-NIR monitoring of visible-light induced polymerization of PEGDA hydrogels initiated by eosin/triethanolamine/O. <i>Polymer Chemistry</i> , 2016 , 7, 592-602	4.9	24
32	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	1.5	3
31	Portable, Constriction-Expansion Blood Plasma Separation and Polymerization-Based Malaria Detection. <i>Analytical Chemistry</i> , 2016 , 88, 7627-32	7.8	11
30	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	4.6	21
29	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	1.9	8
28	A quantitative analysis of peroxy-mediated cyclic regeneration of eosin under oxygen-rich photopolymerization conditions. <i>Polymer</i> , 2015 , 69, 169-177	3.9	11

27	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	7.8	41
26	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, 543-51	1.9	8
25	Staged Inertial Microfluidic Focusing for Complex Fluid Enrichment. <i>RSC Advances</i> , 2015 , 5, 53857-53864	3.7	17
24	Interpreting Heterogeneity in Response of Cells Expressing a Fluorescent Hydrogen Peroxide Biosensor. <i>Biophysical Journal</i> , 2015 , 109, 2148-58	2.9	9
23	Polymerization-based signal amplification for paper-based immunoassays. <i>Lab on A Chip</i> , 2015 , 15, 655-9	7.2	83
22	Addressing Barriers to the Development and Adoption of Rapid Diagnostic Tests in Global Health. <i>Nanobiomedicine</i> , 2015 , 2,	4.8	36
21	Insights into electron leakage in the reaction cycle of cytochrome P450 BM3 revealed by kinetic modeling and mutagenesis. <i>Protein Science</i> , 2015 , 24, 1874-83	6.3	9
20	Investigation of dendrimers functionalized with eosin as macrophotoinitiators for polymerization-based signal amplification reactions. <i>RSC Advances</i> , 2015 , 5, 15652-15659	3.7	20
19	Evaluating the sensitivity of hybridization-based epigenotyping using a methyl binding domain protein. <i>Analyst, The</i> , 2014 , 139, 3695-701	5	19
18	Quantifying intracellular hydrogen peroxide perturbations in terms of concentration. <i>Redox Biology</i> , 2014 , 2, 955-62	11.3	89
17	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	2.8	9
16	Balancing the initiation and molecular recognition capabilities of eosin macroinitiators of polymerization-based signal amplification reactions. <i>Macromolecular Rapid Communications</i> , 2014 , 35, 981-6	4.8	16
15	Impact of dissociation constant on the detection sensitivity of polymerization-based signal amplification reactions. <i>Analytical Chemistry</i> , 2013 , 85, 8055-60	7.8	20
14	Polymerization-based signal amplification under ambient conditions with thirty-five second reaction times. <i>Lab on A Chip</i> , 2012 , 12, 4055-8	7.2	28
13	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, 332-8	2	4
12	Systematic study of fluorescein-functionalized macrophotoinitiators for colorimetric bioassays. <i>Biomacromolecules</i> , 2012 , 13, 1136-43	6.9	33
11	Antigen detection using polymerization-based amplification. <i>Lab on A Chip</i> , 2009 , 9, 653-6	7.2	41
10	Using polymeric materials to generate an amplified response to molecular recognition events. <i>Nature Materials</i> , 2008 , 7, 52-6	27	96

9	Visual detection of labeled oligonucleotides using visible-light-polymerization-based amplification. <i>Biomacromolecules</i> , 2008 , 9, 355-62	6.9	53
8	Interfacial electron-transfer kinetics of ferrocene through oligophenyleneethynylene bridges attached to gold electrodes as constituents of self-assembled monolayers: observation of a nonmonotonic distance dependence. <i>Journal of the American Chemical Society</i> , 2004 , 126, 14620-30	16.4	111
7	Photoelectron Spectroscopy to Probe the Mechanism of Electron Transfer through Oligo(phenylene vinylene) Bridges. <i>Journal of Physical Chemistry B</i> , 2003 , 107, 1170-1173	3.4	15
6	Rapid electron tunneling through oligophenylenevinylene bridges. <i>Science</i> , 2001 , 291, 1519-23	33.3	311
5	Synthesis of ferrocenethiols containing oligo(phenylenevinylene) bridges and their characterization on gold electrodes. <i>Journal of the American Chemical Society</i> , 2001 , 123, 8033-8	16.4	69
4	Kinetics of Self-Assembled Monolayer Growth Explored via Submonolayer Coverage of Incomplete Films. <i>Journal of Physical Chemistry B</i> , 1997 , 101, 7535-7541	3.4	56
3	A Temperature-Dependent Two-Dimensional Condensation Transition during Langmuir-Blodgett Deposition. <i>Langmuir</i> , 1997 , 13, 4704-4709	4	43
2	Two-dimensional melting of an anisotropic crystal observed at the molecular level. <i>Science</i> , 1997 , 278, 1604-7	33.3	53
1	Pattern Formation in a Substrate-Induced Phase Transition during Langmuir-Blodgett Transfer. <i>The Journal of Physical Chemistry</i> , 1996 , 100, 9093-9097		44