

# Matthew R Lockett

## List of Publications by Citations

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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.

58  
papers

2,109  
citations

24  
h-index

45  
g-index

59  
ext. papers

2,357  
ext. citations

7.3  
avg, IF

4.8  
L-index

#	Paper	IF	Citations
58	Mechanism of the hydrophobic effect in the biomolecular recognition of arylsulfonamides by carbonic anhydrase. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , <b>2011</b> , 108, 17889-94	11.5	268
57	Water networks contribute to enthalpy/entropy compensation in protein-ligand binding. <i>Journal of the American Chemical Society</i> , <b>2013</b> , 135, 15579-84	16.4	230
56	A paper-based invasion assay: assessing chemotaxis of cancer cells in gradients of oxygen. <i>Biomaterials</i> , <b>2015</b> , 52, 262-71	15.6	111
55	Three-dimensional paper-based model for cardiac ischemia. <i>Advanced Healthcare Materials</i> , <b>2014</b> , 3, 1036-43	6.43	102
54	Is it the shape of the cavity, or the shape of the water in the cavity?. <i>European Physical Journal: Special Topics</i> , <b>2014</b> , 223, 853-891	2.3	101
53	Covalent photochemical functionalization of amorphous carbon thin films for integrated real-time biosensing. <i>Langmuir</i> , <b>2006</b> , 22, 9598-605	4	90
52	Hydroxycarboxylic acid-derived organosulfates: synthesis, stability, and quantification in ambient aerosol. <i>Environmental Science &amp; Technology</i> , <b>2011</b> , 45, 6468-74	10.3	87
51	Rectification in tunneling junctions: 2,2'-bipyridyl-terminated n-alkanethiolates. <i>Journal of the American Chemical Society</i> , <b>2014</b> , 136, 17155-62	16.4	78
50	Interactions between Hofmeister anions and the binding pocket of a protein. <i>Journal of the American Chemical Society</i> , <b>2015</b> , 137, 3859-66	16.4	76
49	Mitochondrial Protease ClpP is a Target for the Anticancer Compounds ONC201 and Related Analogues. <i>ACS Chemical Biology</i> , <b>2019</b> , 14, 1020-1029	4.9	58
48	A tetrafluorophenyl activated ester self-assembled monolayer for the immobilization of amine-modified oligonucleotides. <i>Langmuir</i> , <b>2008</b> , 24, 69-75	4	55
47	Carbon-on-metal films for surface plasmon resonance detection of DNA arrays. <i>Journal of the American Chemical Society</i> , <b>2008</b> , 130, 8611-3	16.4	54
46	Disulfide-Based Diblock Copolymer Worm Gels: A Wholly-Synthetic Thermoreversible 3D Matrix for Sheet-Based Cultures. <i>Biomacromolecules</i> , <b>2015</b> , 16, 3952-8	6.9	53
45	Metabolic response of lung cancer cells to radiation in a paper-based 3D cell culture system. <i>Biomaterials</i> , <b>2016</b> , 95, 47-59	15.6	49
44	Filter-based assay for Escherichia coli in aqueous samples using bacteriophage-based amplification. <i>Analytical Chemistry</i> , <b>2013</b> , 85, 7213-20	7.8	47
43	Analyzing forensic evidence based on density with magnetic levitation. <i>Journal of Forensic Sciences</i> , <b>2013</b> , 58, 40-5	1.8	46
42	The binding of benzoarylsulfonamide ligands to human carbonic anhydrase is insensitive to formal fluorination of the ligand. <i>Angewandte Chemie - International Edition</i> , <b>2013</b> , 52, 7714-7	16.4	43

41	Real-time imaging of cancer cell chemotaxis in paper-based scaffolds. <i>Analyst, The</i> , <b>2016</b> , 141, 661-8	5	39
40	A pH-Sensing Optode for Mapping Spatiotemporal Gradients in 3D Paper-Based Cell Cultures. <i>Analytical Chemistry</i> , <b>2018</b> , 90, 2376-2383	7.8	32
39	In situ oligonucleotide synthesis on carbon materials: stable substrates for microarray fabrication. <i>Nucleic Acids Research</i> , <b>2008</b> , 36, e7	20.1	30
38	Tracking the Invasion of Small Numbers of Cells in Paper-Based Assays with Quantitative PCR. <i>Analytical Chemistry</i> , <b>2015</b> , 87, 11263-70	7.8	28
37	Attaching Molecules to Chlorinated and Brominated Amorphous Carbon Substrates via Grignard Reactions. <i>Langmuir</i> , <b>2009</b> , 25, 3340-3343	4	28
36	Quantifying oxygen in paper-based cell cultures with luminescent thin film sensors. <i>Analytical and Bioanalytical Chemistry</i> , <b>2016</b> , 408, 2985-92	4.4	28
35	Assessing chemotherapeutic effectiveness using a paper-based tumor model. <i>Analyst, The</i> , <b>2017</b> , 142, 2819-2827	5	24
34	Tissue Papers: Leveraging Paper-Based Microfluidics for the Next Generation of 3D Tissue Models. <i>Analytical Chemistry</i> , <b>2019</b> , 91, 10916-10926	7.8	23
33	Fabrication and characterization of DNA arrays prepared on carbon-on-metal substrates. <i>Analytical Chemistry</i> , <b>2009</b> , 81, 6429-37	7.8	23
32	Rapid determination of RNA accessible sites by surface plasmon resonance detection of hybridization to DNA arrays. <i>Analytical Chemistry</i> , <b>2009</b> , 81, 8949-56	7.8	23
31	Oxygen as a chemoattractant: confirming cellular hypoxia in paper-based invasion assays. <i>Analyst, The</i> , <b>2016</b> , 141, 3874-82	5	21
30	3D cellular invasion platforms: how do paper-based cultures stack up?. <i>Chemical Communications</i> , <b>2017</b> , 53, 7194-7210	5.8	20
29	Paper-based Transwell assays: an inexpensive alternative to study cellular invasion. <i>Analyst, The</i> , <b>2018</b> , 144, 206-211	5	18
28	Fabrication of oligonucleotide and protein arrays on rigid and flexible substrates coated with reactive polymer multilayers. <i>ACS Applied Materials &amp; Interfaces</i> , <b>2013</b> , 5, 351-9	9.5	17
27	Acyl chloride-modified amorphous carbon substrates for the attachment of alcohol-, thiol-, and amine-containing molecules. <i>Langmuir</i> , <b>2009</b> , 25, 5120-6	4	16
26	Aldehyde-terminated amorphous carbon substrates for the fabrication of biomolecule arrays. <i>Langmuir</i> , <b>2008</b> , 24, 9198-203	4	15
25	Screening Estrogen Receptor Modulators in a Paper-Based Breast Cancer Model. <i>Analytical Chemistry</i> , <b>2018</b> , 90, 11981-11988	7.8	14
24	Paper-based Invasion Assays for Quantifying Cellular Movement in Three-dimensional Tissue-like Structures. <i>Current Protocols in Chemical Biology</i> , <b>2017</b> , 9, 75-95	1.8	13

23	The Formation and Stability of Alkylthiol Monolayers on Carbon Substrates. <i>Journal of Physical Chemistry C</i> , <b>2010</b> , 114, 12635-12641	3.8	12
22	Thiol-Ene Modified Amorphous Carbon Substrates: Surface Patterning and Chemically Modified Electrode Preparation. <i>Langmuir</i> , <b>2016</b> , 32, 10529-10536	4	12
21	Developing a Drug Screening Platform: MALDI-Mass Spectrometry Imaging of Paper-Based Cultures. <i>Analytical Chemistry</i> , <b>2019</b> , 91, 15370-15376	7.8	12
20	The Binding of Benzoarylsulfonamide Ligands to Human Carbonic Anhydrase is Insensitive to Formal Fluorination of the Ligand. <i>Angewandte Chemie</i> , <b>2013</b> , 125, 7868-7871	3.6	11
19	In situ Synthesis of Oligonucleotide Arrays on Surfaces Coated with Crosslinked Polymer Multilayers. <i>Chemistry of Materials</i> , <b>2012</b> , 24, 939-945	9.6	10
18	Selective precipitation and purification of monovalent proteins using oligovalent ligands and ammonium sulfate. <i>Bioconjugate Chemistry</i> , <b>2012</b> , 23, 293-9	6.3	10
17	Characterization of vascular endothelial growth factor receptors on the endothelial cell surface during hypoxia using whole cell binding arrays. <i>Analytical Biochemistry</i> , <b>2007</b> , 369, 241-7	3.1	10
16	Molecular beacon-style hybridization assay for quantitative analysis of surface invasive cleavage reactions. <i>Analytical Chemistry</i> , <b>2007</b> , 79, 6031-6	7.8	9
15	RNA-mediated gene assembly from DNA arrays. <i>Angewandte Chemie - International Edition</i> , <b>2012</b> , 51, 4628-32	16.4	8
14	Hypoxia differentially regulates estrogen receptor alpha in 2D and 3D culture formats. <i>Archives of Biochemistry and Biophysics</i> , <b>2019</b> , 671, 8-17	4.1	7
13	Carbon Substrates: A Stable Foundation for Biomolecular Arrays. <i>Annual Review of Analytical Chemistry</i> , <b>2015</b> , 8, 263-85	12.5	7
12	Azide-alkyne click reactions to prepare chemically modified amorphous carbon electrodes. <i>Applied Surface Science</i> , <b>2019</b> , 480, 1109-1115	6.7	6
11	Mechanistic Insights into UV-Initiated ThiolEne Reactions on Amorphous Carbon Films. <i>Journal of Physical Chemistry C</i> , <b>2018</b> , 122, 21854-21860	3.8	6
10	Halogenation of carbon substrates for increased reactivity with alkenes. <i>Langmuir</i> , <b>2010</b> , 26, 16642-6	4	5
9	Generating linear oxygen gradients across 3D cell cultures with block-layered oxygen controlled chips (BLOCCs). <i>Analytical Methods</i> , <b>2020</b> , 12, 18-24	3.2	5
8	Tracking the invasion of breast cancer cells in paper-based 3D cultures by OCT motility analysis. <i>Biomedical Optics Express</i> , <b>2020</b> , 11, 3181-3194	3.5	4
7	Microfabricated Devices for Studying the Metabolism and Cytotoxicity of Drug Candidates. <i>Current Pharmaceutical Biotechnology</i> , <b>2016</b> , 17, 755-71	2.6	4
6	Quantitative Effects of Disorder on Chemically Modified Amorphous Carbon Electrodes. <i>ACS Applied Energy Materials</i> , <b>2020</b> , 3, 8038-8047	6.1	4

5	RNA-Mediated Gene Assembly from DNA Arrays. <i>Angewandte Chemie</i> , <b>2012</b> , 124, 4706-4710	3.6	3
4	Reply to Comment on Hydroxycarboxylic Acid-Derived Organosulfates: Synthesis, Stability and Quantification in Ambient Aerosol. <i>Environmental Science &amp; Technology</i> , <b>2011</b> , 45, 9111-9111	10.3	1
3	Physiologically relevant oxygen tensions differentially regulate hepatotoxic responses in HepG2 cells. <i>Toxicology in Vitro</i> , <b>2021</b> , 74, 105156	3.6	1
2	Spatially resolved quantification of drug metabolism and efficacy in 3D paper-based tumor mimics. <i>Analytica Chimica Acta</i> , <b>2021</b> , 1186, 339091	6.6	1
1	Attaching molecules to chlorinated and brominated amorphous carbon substrates via Grignard reactions. <i>Langmuir</i> , <b>2009</b> , 25, 3340-3	4	