Matthew R Lockett

List of Publications by Year
in descending order

57 papers	2,555 citations	236833 25 h-index	197736 49 g-index
59 all docs	59 docs citations	59 times ranked	3646 citing authors

#	Article	IF	Citations
1	Mechanism of the hydrophobic effect in the biomolecular recognition of arylsulfonamides by carbonic anhydrase. Proceedings of the National Academy of Sciences of the United States of America, 2011, 108, 17889-17894.	3.3	304
2	Water Networks Contribute to Enthalpy/Entropy Compensation in Proteinâ€“Ligand Binding. Journal of the American Chemical Society, 2013, 135, 15579-15584.	6.6	288
3	A paper-based invasion assay: Assessing chemotaxis of cancer cells in gradients of oxygen. Biomaterials, 2015, 52, 262-271.	5.7	132
4	Mitochondrial Protease ClpP is a Target for the Anticancer Compounds ONC201 and Related Analogues. ACS Chemical Biology, 2019, 14, 1020-1029.	1.6	117
5	Is it the shape of the cavity, or the shape of the water in the cavity?. European Physical Journal: Special Topics, 2014, 223, 853-891.	1.2	116
6	Threeâ€Dimensional Paperâ€Based Model for Cardiac Ischemia. Advanced Healthcare Materials, 2014, 3, 1036-1043.	3.9	114
7	Rectification in Tunneling Junctions: 2,2â€²-Bipyridyl-Terminated n-Alkanethiolates. Journal of the American Chemical Society, 2014, 136, 17155-17162.	6.6	105
8	Hydroxycarboxylic Acid-Derived Organosulfates: Synthesis, Stability, and Quantification in Ambient Aerosol. Environmental Science & Technology, 2011, 45, 6468-6474.	4.6	100
9	Covalent Photochemical Functionalization of Amorphous Carbon Thin Films for Integrated Real-Time Biosensing. Langmuir, 2006, 22, 9598-9605.	1.6	96
10	Interactions between Hofmeister Anions and the Binding Pocket of a Protein. Journal of the American Chemical Society, 2015, 137, 3859-3866.	6.6	89
11	A Tetrafluorophenyl Activated Ester Self-Assembled Monolayer for the Immobilization of Amine-Modified Oligonucleotides. Langmuir, 2008, 24, 69-75.	1.6	62
12	Disulfide-Based Diblock Copolymer Worm Gels: A Wholly-Synthetic Thermoreversible 3D Matrix for Sheet-Based Cultures. Biomacromolecules, 2015, 16, 3952-3958.	2.6	62
13	Carbon-on-Metal Films for Surface Plasmon Resonance Detection of DNA Arrays. Journal of the American Chemical Society, 2008, 130, 8611-8613.	6.6	60
14	Metabolic response of lung cancer cells to radiation in a paper-based 3D cell culture system. Biomaterials, 2016, 95, 47-59.	5.7	57
15	Analyzing Forensic Evidence Based on Density with Magnetic Levitation. Journal of Forensic Sciences, 2013, 58, 40-45.	0.9	53
16	Filter-Based Assay for Escherichia coli in Aqueous Samples Using Bacteriophage-Based Amplification. Analytical Chemistry, 2013, 85, 7213-7220.	3.2	53
17	The Binding of Benzoarylsulfonamide Ligands to Human Carbonic Anhydrase is Insensitive to Formal Fluorination of the Ligand. Angewandte Chemie - International Edition, 2013, 52, 7714-7717.	7.2	47
18	Real-time imaging of cancer cell chemotaxis in paper-based scaffolds. Analyst, The, 2016, 141, 661-668.	1.7	41

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19	A pH-Sensing Optode for Mapping Spatiotemporal Gradients in 3D Paper-Based Cell Cultures. Analytical Chemistry, 2018, 90, 2376-2383.	3.2	40
20	In situ oligonucleotide synthesis on carbon materials: stable substrates for microarray fabrication. Nucleic Acids Research, 2007, 36, e7-e7.	6.5	39
21	Quantifying oxygen in paper-based cell cultures with luminescent thin film sensors. Analytical and Bioanalytical Chemistry, 2016, 408, 2985-2992.	1.9	34
22	Tracking the Invasion of Small Numbers of Cells in Paper-Based Assays with Quantitative PCR. Analytical Chemistry, 2015, 87, 11263-11270.	3.2	32
23	Tissue Papers: Leveraging Paper-Based Microfluidics for the Next Generation of 3D Tissue Models. Analytical Chemistry, 2019, 91, 10916-10926.	3.2	31
24	Paper-based Transwell assays: an inexpensive alternative to study cellular invasion. Analyst, The, 2019, 144, 206-211.	1.7	31
25	Attaching Molecules to Chlorinated and Brominated Amorphous Carbon Substrates via Grignard Reactions. Langmuir, 2009, 25, 3340-3343.	1.6	29
26	Assessing chemotherapeutic effectiveness using a paper-based tumor model. Analyst, The, 2017, 142, 2819-2827.	1.7	29
27	Fabrication and Characterization of DNA Arrays Prepared on Carbon-on-Metal Substrates. Analytical Chemistry, 2009, 81, 6429-6437.	3.2	26
28	Rapid Determination of RNA Accessible Sites by Surface Plasmon Resonance Detection of Hybridization to DNA Arrays. Analytical Chemistry, 2009, 81, 8949-8956.	3.2	24
29	Oxygen as a chemoattractant: confirming cellular hypoxia in paper-based invasion assays. Analyst, The, 2016, 141, 3874-3882.	1.7	23
30	3D cellular invasion platforms: how do paper-based cultures stack up?. Chemical Communications, 2017, 53, 7194-7210.	2.2	23
31	Fabrication of Oligonucleotide and Protein Arrays on Rigid and Flexible Substrates Coated with Reactive Polymer Multilayers. ACS Applied Materials & Interfaces, 2013, 5, 351-359.	4.0	21
32	Developing a Drug Screening Platform: MALDI-Mass Spectrometry Imaging of Paper-Based Cultures. Analytical Chemistry, 2019, 91, 15370-15376.	3.2	19
33	Acyl Chloride-Modified Amorphous Carbon Substrates for the Attachment of Alcohol-, Thiol-, and Amine-Containing Molecules. Langmuir, 2009, 25, 5120-5126.	1.6	18
34	Screening Estrogen Receptor Modulators in a Paper-Based Breast Cancer Model. Analytical Chemistry, 2018, 90, 11981-11988.	3.2	18
35	Hypoxia differentially regulates estrogen receptor alpha in 2D and 3D culture formats. Archives of Biochemistry and Biophysics, 2019, 671, 8-17.	1.4	18
36	Paperâ€based Invasion Assays for Quantifying Cellular Movement in Threeâ€dimensional Tissueâ€like Structures. Current Protocols in Chemical Biology, 2017, 9, 75-95.	1.7	17

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37	Aldehyde-Terminated Amorphous Carbon Substrates for the Fabrication of Biomolecule Arrays. Langmuir, 2008, 24, 9198-9203.	1.6	16
38	Formation and Stability of Alkylthiol Monolayers on Carbon Substrates. Journal of Physical Chemistry C, 2010, 114, 12635-12641.	1.5	13
39	Selective Precipitation and Purification of Monovalent Proteins Using Oligovalent Ligands and Ammonium Sulfate. Bioconjugate Chemistry, 2012, 23, 293-299.	1.8	13
40	In situ Synthesis of Oligonucleotide Arrays on Surfaces Coated with Crosslinked Polymer Multilayers. Chemistry of Materials, 2012, 24, 938-945.	3.2	12
41	Thiolâ€“Ene Modified Amorphous Carbon Substrates: Surface Patterning and Chemically Modified Electrode Preparation. Langmuir, 2016, 32, 10529-10536.	1.6	12
42	Physiologically relevant oxygen tensions differentially regulate hepatotoxic responses in HepG2 cells. Toxicology in Vitro, 2021, 74, 105156.	1.1	12
43	Characterization of vascular endothelial growth factor receptors on the endothelial cell surface during hypoxia using whole cell binding arrays. Analytical Biochemistry, 2007, 369, 241-247.	1.1	11
44	Generating linear oxygen gradients across 3D cell cultures with block-layered oxygen controlled chips (BLOCCs). Analytical Methods, 2020, 12, 18-24.	1.3	11
45	Molecular Beacon-Style Hybridization Assay for Quantitative Analysis of Surface Invasive Cleavage Reactions. Analytical Chemistry, 2007, 79, 6031-6036.	3.2	9
46	Carbon Substrates: A Stable Foundation for Biomolecular Arrays. Annual Review of Analytical Chemistry, 2015, 8, 263-285.	2.8	9
47	RNAâ€Mediated Gene Assembly from DNA Arrays. Angewandte Chemie - International Edition, 2012, 51, 4628-4632.	7.2	8
48	Quantitative Effects of Disorder on Chemically Modified Amorphous Carbon Electrodes. ACS Applied Energy Materials, 2020, 3, 8038-8047.	2.5	8
49	Mechanistic Insights into UV-Initiated Thiolâ€“Ene Reactions on Amorphous Carbon Films. Journal of Physical Chemistry C, 2018, 122, 21854-21860.	1.5	7
50	Azideâ€‘alkyne click reactions to prepare chemically modified amorphous carbon electrodes. Applied Surface Science, 2019, 480, 1109-1115.	3.1	7
51	Tracking the invasion of breast cancer cells in paper-based 3D cultures by OCT motility analysis. Biomedical Optics Express, 2020, 11, 3181.	1.5	6
52	Halogenation of Carbon Substrates for Increased Reactivity with Alkenes. Langmuir, 2010, 26, 16642-16646.	1.6	5
53	Spatially resolved quantification of drug metabolism and efficacy in 3D paper-based tumor mimics. Analytica Chimica Acta, 2021, 1186, 339091.	2.6	5
54	Microfabricated Devices for Studying the Metabolism and Cytotoxicity of Drug Candidates. Current Pharmaceutical Biotechnology, 2016, 17, 755-771.	0.9	4

#	Article	IF	Citations
55	HepaRG Cells Adopt Zonal-Like Drug-Metabolizing Phenotypes under Physiologically Relevant Oxygen Tensions and Wnt/Î²-Catenin Signaling. Drug Metabolism and Disposition, 2022, 50, 1098-1105.	1.7	4
56	Reply to Comment on â€œHydroxycarboxylic Acid-Derived Organosulfates: Synthesis, Stability and Quantification in Ambient Aerosolâ€• Environmental Science & Technology, 2011, 45, 9111-9111.	4.6	1
57	Attaching molecules to chlorinated and brominated amorphous carbon substrates via Grignard reactions. Langmuir, 2009, 25, 3340-3.	1.6	0