

Matthew J Baker

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.

90 papers	3,227 citations	27 h-index	55 g-index
95 ext. papers	3,945 ext. citations	6.8 avg, IF	5.19 L-index

#	Paper	IF	Citations
90	Using Fourier transform IR spectroscopy to analyze biological materials. <i>Nature Protocols</i> , 2014 , 9, 1771-1788	28.8	977
89	Developing and understanding biofluid vibrational spectroscopy: a critical review. <i>Chemical Society Reviews</i> , 2016 , 45, 1803-18	58.5	186
88	FTIR-based spectroscopic analysis in the identification of clinically aggressive prostate cancer. <i>British Journal of Cancer</i> , 2008 , 99, 1859-66	8.7	130
87	Clinical applications of infrared and Raman spectroscopy: state of play and future challenges. <i>Analyst, The</i> , 2018 , 143, 1735-1757	5	114
86	A correlation of FTIR spectra derived from prostate cancer biopsies with gleason grade and tumour stage. <i>European Urology</i> , 2006 , 50, 750-60; discussion 760-1	10.2	99
85	Brain tumour differentiation: rapid stratified serum diagnostics via attenuated total reflection Fourier-transform infrared spectroscopy. <i>Journal of Neuro-Oncology</i> , 2016 , 127, 463-72	4.8	90
84	Investigating FTIR based histopathology for the diagnosis of prostate cancer. <i>Journal of Biophotonics</i> , 2009 , 2, 104-13	3.1	85
83	Attenuated total reflection fourier transform infrared (ATR-FTIR) spectral discrimination of brain tumour severity from serum samples. <i>Journal of Biophotonics</i> , 2014 , 7, 189-99	3.1	83
82	Improved protocols for vibrational spectroscopic analysis of body fluids. <i>Journal of Biophotonics</i> , 2014 , 7, 167-79	3.1	73
81	Development of high-throughput ATR-FTIR technology for rapid triage of brain cancer. <i>Nature Communications</i> , 2019 , 10, 4501	17.4	67
80	Vibrational spectroscopic methods for cytology and cellular research. <i>Analyst, The</i> , 2014 , 139, 4411-44	5	65
79	Investigating the rapid diagnosis of gliomas from serum samples using infrared spectroscopy and cytokine and angiogenesis factors. <i>Analytical and Bioanalytical Chemistry</i> , 2013 , 405, 7347-55	4.4	54
78	Biofluid spectroscopic disease diagnostics: A review on the processes and spectral impact of drying. <i>Journal of Biophotonics</i> , 2018 , 11, e201700299	3.1	48
77	Combining random forest and 2D correlation analysis to identify serum spectral signatures for neuro-oncology. <i>Analyst, The</i> , 2016 , 141, 3668-78	5	43
76	Ultra-filtration of human serum for improved quantitative analysis of low molecular weight biomarkers using ATR-IR spectroscopy. <i>Analyst, The</i> , 2017 , 142, 1285-1298	5	40
75	Vibrational spectroscopic analysis of body fluids: avoiding molecular contamination using centrifugal filtration. <i>Analytical Methods</i> , 2014 , 6, 5155	3.2	36
74	Can mid-infrared biomedical spectroscopy of cells, fluids and tissue aid improvements in cancer survival? A patient paradigm. <i>Analyst, The</i> , 2016 , 141, 467-75	5	35

73	Effect of substrate choice and tissue type on tissue preparation for spectral histopathology by Raman microspectroscopy. <i>Analyst, The</i> , 2014 , 139, 446-54	5	35
72	Screening the low molecular weight fraction of human serum using ATR-IR spectroscopy. <i>Journal of Biophotonics</i> , 2016 , 9, 1085-1097	3.1	34
71	Investigating optimum sample preparation for infrared spectroscopic serum diagnostics. <i>Analytical Methods</i> , 2015 , 7, 7140-7149	3.2	33
70	Rapid FTIR chemical imaging: highlighting FPA detectors. <i>Trends in Biotechnology</i> , 2013 , 31, 437-8	15.1	33
69	An investigation of the RWPE prostate derived family of cell lines using FTIR spectroscopy. <i>Analyst, The</i> , 2010 , 135, 887-94	5	33
68	Introducing Discrete Frequency Infrared Technology for High-Throughput Biofluid Screening. <i>Scientific Reports</i> , 2016 , 6, 20173	4.9	33
67	Is Infrared Spectroscopy Ready for the Clinic?. <i>Analytical Chemistry</i> , 2019 , 91, 12117-12128	7.8	32
66	Biofluid diagnostics by FTIR spectroscopy: A platform technology for cancer detection. <i>Cancer Letters</i> , 2020 , 477, 122-130	9.9	32
65	Mass spectral imaging of glycopospholipids, cholesterol, and glycophorin a in model cell membranes. <i>Langmuir</i> , 2008 , 24, 11803-10	4	31
64	Highlighting attenuated total reflection Fourier transform infrared spectroscopy for rapid serum analysis. <i>Trends in Biotechnology</i> , 2013 , 31, 327-8	15.1	27
63	Salivary molecular spectroscopy: A sustainable, rapid and non-invasive monitoring tool for diabetes mellitus during insulin treatment. <i>PLoS ONE</i> , 2020 , 15, e0223461	3.7	26
62	Quantifying Secondary Structure Changes in Calmodulin Using 2D-IR Spectroscopy. <i>Analytical Chemistry</i> , 2017 , 89, 10898-10906	7.8	26
61	Detection of the organophosphorus nerve agent VX and its hydrolysis products in white mustard plants grown in contaminated soil. <i>Analytical Methods</i> , 2013 , 5, 50-53	3.2	26
60	Utilization of an Electrochemiluminescence Sensor for Atropine Determination in Complex Matrices. <i>Analytical Chemistry</i> , 2019 , 91, 12369-12376	7.8	25
59	Discrimination of prostate cancer cells and non-malignant cells using secondary ion mass spectrometry. <i>Analyst, The</i> , 2008 , 133, 175-9	5	25
58	Enabling quantification of protein concentration in human serum biopsies using attenuated total reflectance Fourier transform infrared (ATR-FTIR) spectroscopy. <i>Vibrational Spectroscopy</i> , 2018 , 99, 50-58	2.1	25
57	Health economic evaluation of a serum-based blood test for brain tumour diagnosis: exploration of two clinical scenarios. <i>BMJ Open</i> , 2018 , 8, e017593	3	24
56	Optimised spectral pre-processing for discrimination of biofluids via ATR-FTIR spectroscopy. <i>Analyst, The</i> , 2018 , 143, 6121-6134	5	24

55	Shining a light on clinical spectroscopy: Translation of diagnostic IR, 2D-IR and Raman spectroscopy towards the clinic. <i>Clinical Spectroscopy</i> , 2019 , 1, 100003	16	23
54	Measuring proteins in HO with 2D-IR spectroscopy. <i>Chemical Science</i> , 2019 , 10, 6448-6456	9.4	22
53	Investigating the use of Raman and immersion Raman spectroscopy for spectral histopathology of metastatic brain cancer and primary sites of origin. <i>Analytical Methods</i> , 2014 , 6, 3948-3961	3.2	21
52	Developing infrared spectroscopic detection for stratifying brain tumour patients: glioblastoma multiforme vs. lymphoma. <i>Analyst, The</i> , 2019 , 144, 6736-6750	5	21
51	Quantum Cascade Lasers in Biomedical Infrared Imaging. <i>Trends in Biotechnology</i> , 2015 , 33, 557-558	15.1	20
50	Rapid Screening of DNA-Ligand Complexes via 2D-IR Spectroscopy and ANOVA-PCA. <i>Analytical Chemistry</i> , 2018 , 90, 2732-2740	7.8	19
49	Evidence of VX nerve agent use from contaminated white mustard plants. <i>Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences</i> , 2014 , 470, 20140076	2.4	19
48	Feature driven classification of Raman spectra for real-time spectral brain tumour diagnosis using sound. <i>Analyst, The</i> , 2016 , 142, 98-109	5	19
47	A comparative study of secondary ion yield from model biological membranes using Aun+ and C60+ primary ion sources. <i>Applied Surface Science</i> , 2006 , 252, 6731-6733	6.7	19
46	Analysis of bodily fluids using vibrational spectroscopy: a direct comparison of Raman scattering and infrared absorption techniques for the case of glucose in blood serum. <i>Analyst, The</i> , 2019 , 144, 3334-3346	5.3346	17
45	Rapid discrimination of maggots utilising ATR-FTIR spectroscopy. <i>Forensic Science International</i> , 2015 , 249, 189-96	2.6	16
44	ToF-SIMS PC-DFA analysis of prostate cancer cell lines. <i>Applied Surface Science</i> , 2008 , 255, 1084-1087	6.7	15
43	A review of novel analytical diagnostics for liquid biopsies: spectroscopic and spectrometric serum profiling of primary and secondary brain tumors. <i>Brain and Behavior</i> , 2016 , 6, e00502	3.4	15
42	Stratifying Brain Tumour Histological Sub-Types: The Application of ATR-FTIR Serum Spectroscopy in Secondary Care. <i>Cancers</i> , 2020 , 12,	6.6	14
41	Investigating lipid-lipid and lipid-protein interactions in model membranes by ToF-SIMS. <i>Applied Surface Science</i> , 2008 , 255, 1190-1192	6.7	14
40	Infrared Based Saliva Screening Test for COVID-19. <i>Angewandte Chemie - International Edition</i> , 2021 , 60, 17102-17107	16.4	13
39	Functionalising the azobenzene motif delivers a light-responsive membrane-interactive compound with the potential for photodynamic therapy applications. <i>Organic and Biomolecular Chemistry</i> , 2015 , 13, 8067-70	3.9	12
38	Carbon nanotubes for stabilization of nanostructured lipid particles. <i>Nanoscale</i> , 2015 , 7, 1090-5	7.7	11

37	quids at Pinwheel Cave, California, provide unambiguous confirmation of the ingestion of hallucinogens at a rock art site. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2020 , 117, 31026-31037	11.5	11
36	Biofluids and other techniques: general discussion. <i>Faraday Discussions</i> , 2016 , 187, 575-601	3.6	10
35	2D-Infrared Spectroscopy of Proteins in Water: Using the Solvent Thermal Response as an Internal Standard. <i>Analytical Chemistry</i> , 2020 , 92, 3463-3469	7.8	9
34	Twittering About Research: A Case Study of the World's First Twitter Poster Competition. <i>F1000Research</i> , 2015 , 4, 798	3.6	9
33	Two-dimensional infrared spectroscopy: an emerging analytical tool?. <i>Analyst, The</i> , 2020 , 145, 2014-2024	5	8
32	Investigating pre-analytical requirements for serum and plasma based infrared spectro-diagnostic. <i>Journal of Biophotonics</i> , 2019 , 12, e201900177	3.1	8
31	Spectroscopic analysis of bacterial biological warfare simulants and the effects of environmental conditioning on a bacterial spectrum. <i>Analytical and Bioanalytical Chemistry</i> , 2012 , 404, 2307-15	4.4	8
30	Preclinical screening of anticancer drugs using infrared (IR) microspectroscopy. <i>Trends in Biotechnology</i> , 2015 , 33, 429-30	15.1	7
29	Interrogation of Status in Gliomas by Fourier Transform Infrared Spectroscopy. <i>Cancers</i> , 2020 , 12,	6.6	7
28	Rapid analysis of disease state in liquid human serum combining infrared spectroscopy and "digital drying". <i>Journal of Biophotonics</i> , 2020 , 13, e202000118	3.1	6
27	Clinical Spectroscopy: general discussion. <i>Faraday Discussions</i> , 2016 , 187, 429-60	3.6	6
26	Developing a mobile app for remote access to and data analysis of spectra. <i>Vibrational Spectroscopy</i> , 2014 , 72, 37-43	2.1	6
25	Insight into the swelling mechanism involved in the recovery of serial numbers erased from polymer surfaces. <i>Surface and Interface Analysis</i> , 2011 , 43, 625-627	1.5	6
24	Early economic evaluation to guide the development of a spectroscopic liquid biopsy for the detection of brain cancer. <i>International Journal of Technology Assessment in Health Care</i> , 2021 , 37, e41	1.8	6
23	Methodological considerations of integrating portable digital technologies in the analysis and management of complex superimposed Californian pictographs: From spectroscopy and spectral imaging to 3-D scanning. <i>Digital Applications in Archaeology and Cultural Heritage</i> , 2015 , 2, 166-180	2.1	5
22	Developing a Low-Cost, Simple-to-Use Electrochemical Sensor for the Detection of Circulating Tumour DNA in Human Fluids. <i>Biosensors</i> , 2020 , 10,	5.9	5
21	Spectral Pathology: general discussion. <i>Faraday Discussions</i> , 2016 , 187, 155-86	3.6	4
20	Single cell analysis/data handling: general discussion. <i>Faraday Discussions</i> , 2016 , 187, 299-327	3.6	4

19	Twittering About Research: A Case Study of the World's First Twitter Poster Competition. <i>F1000Research</i> , 4, 798	3.6	4
18	Discrimination of fresh frozen non-tumour and tumour brain tissue using spectrochemical analyses and a classification model. <i>British Journal of Neurosurgery</i> , 2020, 34, 40-45	1	4
17	Detection of Glycine as a Model Protein in Blood Serum Using 2D-IR Spectroscopy. <i>Analytical Chemistry</i> , 2021, 93, 920-927	7.8	4
16	Infrared Based Saliva Screening Test for COVID-19. <i>Angewandte Chemie</i> , 2021, 133, 17239-17244	3.6	3
15	Elemental and molecular profiling of licit, illicit, and niche tobacco. <i>Forensic Science International</i> , 2016, 266, 549-554	2.6	3
14	Vibrational spectroscopic analysis and quantification of proteins in human blood plasma and serum 2020, 269-314		2
13	Spectroscopic investigations of surface deposited biological warfare simulants 2012,		2
12	Sources of flint in Britain and Ireland: A quantitative assessment of geochemical characterisation using acid digestion inductively coupled plasma-mass spectrometry (ICP-MS). <i>Journal of Archaeological Science: Reports</i> , 2020, 31, 102281	0.7	1
11	Five years of the #RSCPoster Twitter conference. <i>Chemical Communications</i> , 2020, 56, 13681-13688	5.8	1
10	Optimisation of an Electrochemical DNA Sensor for Measuring KRAS G12D and G13D Point Mutations in Different Tumour Types. <i>Biosensors</i> , 2021, 11,	5.9	1
9	Clinical validation of a spectroscopic liquid biopsy for earlier detection of brain cancer.. <i>Neuro-Oncology Advances</i> , 2022, 4, vda024	0.9	0
8	Vibrational spectroscopy of serum to detect brain metastases in patients with melanoma.. <i>Journal of Clinical Oncology</i> , 2015, 33, e22151-e22151	2.2	
7	Electrochemical DNA Detection Methods to Measure Circulating Tumour DNA for Enhanced Diagnosis and Monitoring of Cancer. <i>Proceedings (mdpi)</i> , 2020, 60, 15	0.3	
6	Salivary molecular spectroscopy: A sustainable, rapid and non-invasive monitoring tool for diabetes mellitus during insulin treatment 2020, 15, e0223461		
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