Wolfram Miekisch

List of Publications by Year
in descending order

81	5,998	101543	71685
papers	citations	36 h-index	76 g-index

86	86	86	4059
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Diagnostic potential of breath analysisâ€"focus on volatile organic compounds. Clinica Chimica Acta, 2004, 347, 25-39.	1.1	906
2	The human volatilome: volatile organic compounds (VOCs) in exhaled breath, skin emanations, urine, feces and saliva. Journal of Breath Research, 2014, 8, 034001.	3.0	504
3	Noninvasive detection of lung cancer by analysis of exhaled breath. BMC Cancer, 2009, 9, 348.	2.6	472
4	Breath gas aldehydes as biomarkers of lung cancer. International Journal of Cancer, 2010, 126, 2663-2670.	5.1	359
5	Determination of volatile organic compounds in exhaled breath of patients with lung cancer using solid phase microextraction and gas chromatography mass spectrometry. Clinical Chemistry and Laboratory Medicine, 2009, 47, 550-60.	2.3	216
6	TD-GC-MS Analysis of Volatile Metabolites of Human Lung Cancer and Normal Cells In vitro. Cancer Epidemiology Biomarkers and Prevention, 2010, 19, 182-195.	2.5	205
7	Breath biomarkers for lung cancer detection and assessment of smoking related effects â€" confounding variables, influence of normalization and statistical algorithms. Clinica Chimica Acta, 2010, 411, 1637-1644.	1.1	178
8	Release of volatile organic compounds (VOCs) from the lung cancer cell line CALU-1 in vitro. Cancer Cell International, 2008, 8, 17.	4.1	163
9	Analysis of Exhaled Breath for Disease Detection. Annual Review of Analytical Chemistry, 2014, 7, 455-482.	5.4	160
10	Impact of sampling procedures on the results of breath analysis. Journal of Breath Research, 2008, 2, 026007.	3.0	132
11	Breath isoprene â€“ aspects of normal physiology related to age, gender and cholesterol profile as determined in a proton transfer reaction mass spectrometry study. Clinical Chemistry and Laboratory Medicine, 2008, 46, 1011-8.	2.3	131
12	Automated Needle Trap Heart-Cut GC/MS and Needle Trap Comprehensive Two-Dimensional GC/TOF-MS for Breath Gas Analysis in the Clinical Environment. Analytical Chemistry, 2010, 82, 2541-2551.	6.5	128
13	Continuous Real Time Breath Gas Monitoring in the Clinical Environment by Proton-Transfer-Reaction-Time-of-Flight-Mass Spectrometry. Analytical Chemistry, 2013, 85, 10321-10329.	6.5	126
14	Assessment of propofol concentrations in human breath and blood by means of HS-SPMEâ€"GCâ€"MS. Clinica Chimica Acta, 2008, 395, 32-37.	1.1	123
15	Analysis of Volatile Disease Markers in Blood. Clinical Chemistry, 2001, 47, 1053-1060.	3.2	113
16	Release of volatile organic compounds from the lung cancer cell line NCI-H2087 in vitro. Anticancer Research, 2009, 29, 419-26.	1.1	110
17	Breath analysis in critically ill patients: potential and limitations. Expert Review of Molecular Diagnostics, 2004, 4, 619-629.	3.1	97
18	Multibed Needle Trap Devices for on Site Sampling and Preconcentration of Volatile Breath Biomarkers. Analytical Chemistry, 2009, 81, 5851-5857.	6.5	97

#	Article	IF	Citations
19	Needle trap micro-extraction for VOC analysis: Effects of packing materials and desorption parameters. Journal of Chromatography A, 2012, 1219, 29-38.	3.7	92
20	Data interpretation in breath biomarker research: pitfalls and directions. Journal of Breath Research, 2012, 6, 036007.	3.0	84
21	Phase-resolved real-time breath analysis during exercise by means of smart processing of PTR-MS data. Analytical and Bioanalytical Chemistry, 2011, 401, 2079-2091.	3.7	77
22	Monitoring of oxidative and metabolic stress during cardiac surgery by means of breath biomarkers: an observational study. Journal of Cardiothoracic Surgery, 2007, 2, 37.	1.1	74
23	Evaluation of needle trap micro-extraction and automatic alveolar sampling for point-of-care breath analysis. Analytical and Bioanalytical Chemistry, 2013, 405, 3105-3115.	3.7	69
24	Instant effects of changing body positions on compositions of exhaled breath. Journal of Breath Research, 2015, 9, 047105.	3.0	68
25	Immediate effects of breath holding maneuvers onto composition of exhaled breath. Journal of Breath Research, 2014, 8, 037102.	3.0	66
26	Breath Markers and Soluble Lipid Peroxidation Markers in Critically Ill Patients. Clinical Chemistry and Laboratory Medicine, 2002, 40, 587-94.	2.3	65
27	VOC breath profile in spontaneously breathing awake swine during Influenza A infection. Scientific Reports, 2018, 8, 14857.	3.3	61
28	Drug detection in breath: effects of pulmonary blood flow and cardiac output on propofol exhalation. Analytical and Bioanalytical Chemistry, 2011, 401, 2093-102.	3.7	56
29	FEV manoeuvre induced changes in breath VOC compositions: an unconventional view on lung function tests. Scientific Reports, 2016, 6, 28029.	3.3	56
30	Metabolic monitoring and assessment of anaerobic threshold by means of breath biomarkers. Metabolomics, 2012, 8, 1069-1080.	3.0	49
31	Volatile Emissions from Mycobacterium avium subsp. paratuberculosis Mirror Bacterial Growth and Enable Distinction of Different Strains. PLoS ONE, 2013, 8, e76868.	2.5	48
32	Exhaled volatile substances mirror clinical conditions in pediatric chronic kidney disease. PLoS ONE, 2017, 12, e0178745.	2.5	47
33	In Vivo Volatile Organic Compound Signatures of Mycobacterium avium subsp. paratuberculosis. PLoS ONE, 2015, 10, e0123980.	2.5	45
34	Drug detection in breath: non-invasive assessment of illicit or pharmaceutical drugs. Journal of Breath Research, 2017, 11, 024001.	3.0	42
35	Breath analysis during one-lung ventilation in cancer patients. European Respiratory Journal, 2012, 40, 706-713.	6.7	39
36	Effects of humidity, CO ₂ and O ₂ on real-time quantitation of breath biomarkers by means of PTR-ToF-MS. Journal of Breath Research, 2018, 12, 026016.	3.0	39

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37	A novel visually CO2 controlled alveolar breath sampling technique. Technology and Health Care, 2006, 14, 499-506.	1.2	37
38	Exhaled breath compositions under varying respiratory rhythms reflects ventilatory variations: translating breathomics towards respiratory medicine. Scientific Reports, 2020, 10, 14109.	3.3	37
39	Applied upper-airway resistance instantly affects breath components: a unique insight into pulmonary medicine. Journal of Breath Research, 2017, 11, 047108.	3.0	35
40	Natural menstrual rhythm and oral contraception diversely affect exhaled breath compositions. Scientific Reports, 2018, 8, 10838.	3.3	35
41	Exhaled volatile substances in children suffering from type 1 diabetes mellitus: results from a cross-sectional study. Scientific Reports, 2019, 9, 15707.	3.3	34
42	Monitoring of breath VOCs and electrical impedance tomography under pulmonary recruitment in mechanically ventilated patients. Journal of Breath Research, 2017, 11, 016005.	3.0	33
43	Deficiency and absence of endogenous isoprene in adults, disqualified its putative origin. Heliyon, 2021, 7, e05922.	3.2	30
44	Construction and Evaluation of a Versatile ${hbox {CO}}_{2}$ Controlled Breath Collection Device. IEEE Sensors Journal, 2010, 10, 211-215.	4.7	29
45	Physiological variability in volatile organic compounds (VOCs) in exhaled breath and released from faeces due to nutrition and somatic growth in a standardized caprine animal model. Journal of Breath Research, 2015, 9, 027108.	3.0	28
46	Non-Invasive Assessment of Metabolic Adaptation in Paediatric Patients Suffering from Type 1 Diabetes Mellitus. Journal of Clinical Medicine, 2019, 8, 1797.	2.4	27
47	Volatile scents of influenza A and S. pyogenes (co-)infected cells. Scientific Reports, 2019, 9, 18894.	3.3	26
48	Microextraction techniques in breath biomarker analysis. Bioanalysis, 2014, 6, 1275-1291.	1.5	25
49	Impact of food intake onin vivoVOC concentrations in exhaled breath assessed in a caprine animal model. Journal of Breath Research, 2015, 9, 047113.	3.0	25
50	Effects of biological and methodological factors on volatile organic compound patterns during cultural growth of Mycobacterium avium ssp . paratuberculosis. Journal of Breath Research, 2016, 10, 037103.	3.0	24
51	Continuous real-time breath analysis in ruminants: effect of eructation on exhaled VOC profiles. Journal of Breath Research, 2018, 12, 036014.	3.0	20
52	Differences in the Emission of Volatile Organic Compounds (VOCs) between Non-Differentiating and Adipogenically Differentiating Mesenchymal Stromal/Stem Cells from Human Adipose Tissue. Cells, 2019, 8, 697.	4.1	18
53	Changes of Exhaled Volatile Organic Compounds in Postoperative Patients Undergoing Analgesic Treatment: A Prospective Observational Study. Metabolites, 2020, 10, 321.	2.9	18
54	Physiological and metabolic effects of healthy female aging on exhaled breath biomarkers. IScience, 2022, 25, 103739.	4.1	18

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55	The Effects of Prebiotic Supplementation with OMNi-LOGiCÂ® FIBRE on Fecal Microbiome, Fecal Volatile Organic Compounds, and Gut Permeability in Murine Neuroblastoma-Induced Tumor-Associated Cachexia. Nutrients, 2020, 12, 2029.	4.1	17
56	Extending PTR based breath analysis to real-time monitoring of reactive volatile organic compounds. Analyst, The, 2019, 144, 7359-7367.	3.5	16
57	Volatile breath biomarkers for patient monitoring during haemodialysis. Journal of Breath Research, 2013, 7, 017116.	3.0	14
58	Breath sampling and standardization. , 2020, , 23-41.		14
59	Comparative analysis of volatile organic compounds for the classification and identification of mycobacterial species. PLoS ONE, 2018, 13, e0194348.	2.5	14
60	Strategies for the identification of disease-related patterns of volatile organic compounds: prediction of paratuberculosis in an animal model using random forests. Journal of Breath Research, 2017, 11, 047105.	3.0	13
61	Crowd monitoring in dairy cattleâ€"real-time VOC profiling by direct mass spectrometry. Journal of Breath Research, 2019, 13, 046006.	3.0	10
62	Effects of elevated oxygen levels on VOC analysis by means of PTR-ToF-MS. Journal of Breath Research, 2019, 13, 046004.	3.0	9
63	Adapting biomarker technologies to adverse outcome pathways (AOPs) research: current thoughts on using in vivo discovery for developing in vitro target methods. Journal of Breath Research, 2015, 9, 039001.	3.0	8
64	Evaluation of needle trap microâ€extraction and solidâ€phase microâ€extraction: Obtaining comprehensive information on volatile emissions from in vitro cultures. Biomedical Chromatography, 2018, 32, e4285.	1.7	8
65	Detection of Mycobacterium avium ssp. paratuberculosis in Cultures From Fecal and Tissue Samples Using VOC Analysis and Machine Learning Tools. Frontiers in Veterinary Science, 2021, 8, 620327.	2.2	7
66	Breath Analysis in Critically Ill Patientsâ€"Potential and Limitations. , 2013, , 155-176.		6
67	Cellular respiration, metabolomics and the search for illicit drug biomarkers in breath: report from PittCon 2017. Journal of Breath Research, 2017, 11, 039001.	3.0	6
68	The effects of neuroblastoma and chemotherapy on metabolism, fecal microbiome, volatile organic compounds, and gut barrier function in a murine model. Pediatric Research, 2019, 85, 546-555.	2.3	6
69	Insights into the Composition of a Co-Culture of 10 Probiotic Strains (OMNi BiOTiCÂ® AAD10) and Effects of Its Postbiotic Culture Supernatant. Nutrients, 2022, 14, 1194.	4.1	6
70	Effects of modular ion-funnel technology onto analysis of breath VOCs by means of real-time mass spectrometry. Analytical and Bioanalytical Chemistry, 2020, 412, 7131-7140.	3.7	5
71	Production, Storage Stability, and Susceptibility Testing of Reuterin and Its Impact on the Murine Fecal Microbiome and Volatile Organic Compound Profile. Frontiers in Microbiology, 2021, 12, 699858.	3.5	5
72	Smell of cells: Volatile profiling of stem- and non-stem cell proliferation. Journal of Breath Research, 2018, 12, 026014.	3.0	4

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73	Versatile set-up for non-invasive in vitro analysis of headspace VOCs. Journal of Breath Research, 2018, 12, 041001.	3.0	4
74	Core profile of volatile organic compounds related to growth of Mycobacterium avium subspecies paratuberculosis â€“ A comparative extract of three independent studies. PLoS ONE, 2019, 14, e0221031.	2.5	4
75	(S)-Reutericyclin: Susceptibility Testing and In Vivo Effect on Murine Fecal Microbiome and Volatile Organic Compounds. International Journal of Molecular Sciences, 2021, 22, 6424.	4.1	3
76	Detection of Paratuberculosis in Dairy Herds by Analyzing the Scent of Feces, Alveolar Gas and Stable Air. Molecules, 2021, 26, 2854.	3.8	2
77	Volatile Organic Compounds, Bacterial Airway Microbiome, Spirometry and Exercise Performance of Patients after Surgical Repair of Congenital Diaphragmatic Hernia. Molecules, 2021, 26, 645.	3.8	1
78	Ruminants. , 2020, , 441-460.		1
79	Spatial mapping of VOC exhalation by means of bronchoscopic sampling. Journal of Breath Research, 2020, 14, 046012.	3.0	1
80	Breath monitoring in the intensive care unit. , 2020, , 289-303.		0
81	Non-Invasive O-Toluidine Monitoring during Regional Anaesthesia with Prilocaine and Detection of Accidental Intravenous Injection in an Animal Model. Metabolites, 2022, 12, 502.	2.9	0