

# Wolfram Miekisch

## List of Publications by Year in descending order

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81  
papers

5,998  
citations

101496

36  
h-index

71651

76  
g-index

86  
all docs

86  
docs citations

86  
times ranked

4059  
citing authors

#	ARTICLE	IF	CITATIONS
1	Diagnostic potential of breath analysis – focus on volatile organic compounds. Clinica Chimica Acta, 2004, 347, 25-39.	0.5	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.	1.5	504
3	Noninvasive detection of lung cancer by analysis of exhaled breath. BMC Cancer, 2009, 9, 348.	1.1	472
4	Breath gas aldehydes as biomarkers of lung cancer. International Journal of Cancer, 2010, 126, 2663-2670.	2.3	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.	1.4	216
6	TD-GC-MS Analysis of Volatile Metabolites of Human Lung Cancer and Normal Cells <i>In vitro</i> . Cancer Epidemiology Biomarkers and Prevention, 2010, 19, 182-195.	1.1	205
7	Breath biomarkers for lung cancer detection and assessment of smoking related effects – confounding variables, influence of normalization and statistical algorithms. Clinica Chimica Acta, 2010, 411, 1637-1644.	0.5	178
8	Release of volatile organic compounds (VOCs) from the lung cancer cell line CALU-1 in vitro. Cancer Cell International, 2008, 8, 17.	1.8	163
9	Analysis of Exhaled Breath for Disease Detection. Annual Review of Analytical Chemistry, 2014, 7, 455-482.	2.8	160
10	Impact of sampling procedures on the results of breath analysis. Journal of Breath Research, 2008, 2, 026007.	1.5	132
11	Breath isoprene – 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.	1.4	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.	3.2	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.	3.2	126
14	Assessment of propofol concentrations in human breath and blood by means of HS-SPME – GC – MS. Clinica Chimica Acta, 2008, 395, 32-37.	0.5	123
15	Analysis of Volatile Disease Markers in Blood. Clinical Chemistry, 2001, 47, 1053-1060.	1.5	113
16	Release of volatile organic compounds from the lung cancer cell line NCI-H2087 in vitro. Anticancer Research, 2009, 29, 419-26.	0.5	110
17	Breath analysis in critically ill patients: potential and limitations. Expert Review of Molecular Diagnostics, 2004, 4, 619-629.	1.5	97
18	Multibed Needle Trap Devices for on Site Sampling and Preconcentration of Volatile Breath Biomarkers. Analytical Chemistry, 2009, 81, 5851-5857.	3.2	97

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19	Needle trap micro-extraction for VOC analysis: Effects of packing materials and desorption parameters. <i>Journal of Chromatography A</i> , 2012, 1219, 29-38.	1.8	92
20	Data interpretation in breath biomarker research: pitfalls and directions. <i>Journal of Breath Research</i> , 2012, 6, 036007.	1.5	84
21	Phase-resolved real-time breath analysis during exercise by means of smart processing of PTR-MS data. <i>Analytical and Bioanalytical Chemistry</i> , 2011, 401, 2079-2091.	1.9	77
22	Monitoring of oxidative and metabolic stress during cardiac surgery by means of breath biomarkers: an observational study. <i>Journal of Cardiothoracic Surgery</i> , 2007, 2, 37.	0.4	74
23	Evaluation of needle trap micro-extraction and automatic alveolar sampling for point-of-care breath analysis. <i>Analytical and Bioanalytical Chemistry</i> , 2013, 405, 3105-3115.	1.9	69
24	Instant effects of changing body positions on compositions of exhaled breath. <i>Journal of Breath Research</i> , 2015, 9, 047105.	1.5	68
25	Immediate effects of breath holding maneuvers onto composition of exhaled breath. <i>Journal of Breath Research</i> , 2014, 8, 037102.	1.5	66
26	Breath Markers and Soluble Lipid Peroxidation Markers in Critically Ill Patients. <i>Clinical Chemistry and Laboratory Medicine</i> , 2002, 40, 587-94.	1.4	65
27	VOC breath profile in spontaneously breathing awake swine during Influenza A infection. <i>Scientific Reports</i> , 2018, 8, 14857.	1.6	61
28	Drug detection in breath: effects of pulmonary blood flow and cardiac output on propofol exhalation. <i>Analytical and Bioanalytical Chemistry</i> , 2011, 401, 2093-102.	1.9	56
29	FEV manoeuvre induced changes in breath VOC compositions: an unconventional view on lung function tests. <i>Scientific Reports</i> , 2016, 6, 28029.	1.6	56
30	Metabolic monitoring and assessment of anaerobic threshold by means of breath biomarkers. <i>Metabolomics</i> , 2012, 8, 1069-1080.	1.4	49
31	Volatile Emissions from <i>Mycobacterium avium</i> subsp. <i>paratuberculosis</i> Mirror Bacterial Growth and Enable Distinction of Different Strains. <i>PLoS ONE</i> , 2013, 8, e76868.	1.1	48
32	Exhaled volatile substances mirror clinical conditions in pediatric chronic kidney disease. <i>PLoS ONE</i> , 2017, 12, e0178745.	1.1	47
33	In Vivo Volatile Organic Compound Signatures of <i>Mycobacterium avium</i> subsp. <i>paratuberculosis</i> . <i>PLoS ONE</i> , 2015, 10, e0123980.	1.1	45
34	Drug detection in breath: non-invasive assessment of illicit or pharmaceutical drugs. <i>Journal of Breath Research</i> , 2017, 11, 024001.	1.5	42
35	Breath analysis during one-lung ventilation in cancer patients. <i>European Respiratory Journal</i> , 2012, 40, 706-713.	3.1	39
36	Effects of humidity, CO <sub>2</sub> and O <sub>2</sub> on real-time quantitation of breath biomarkers by means of PTR-ToF-MS. <i>Journal of Breath Research</i> , 2018, 12, 026016.	1.5	39

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37	A novel visually CO <sub>2</sub> controlled alveolar breath sampling technique. <i>Technology and Health Care</i> , 2006, 14, 499-506.	0.5	37
38	Exhaled breath compositions under varying respiratory rhythms reflects ventilatory variations: translating breathomics towards respiratory medicine. <i>Scientific Reports</i> , 2020, 10, 14109.	1.6	37
39	Applied upper-airway resistance instantly affects breath components: a unique insight into pulmonary medicine. <i>Journal of Breath Research</i> , 2017, 11, 047108.	1.5	35
40	Natural menstrual rhythm and oral contraception diversely affect exhaled breath compositions. <i>Scientific Reports</i> , 2018, 8, 10838.	1.6	35
41	Exhaled volatile substances in children suffering from type 1 diabetes mellitus: results from a cross-sectional study. <i>Scientific Reports</i> , 2019, 9, 15707.	1.6	34
42	Monitoring of breath VOCs and electrical impedance tomography under pulmonary recruitment in mechanically ventilated patients. <i>Journal of Breath Research</i> , 2017, 11, 016005.	1.5	33
43	Deficiency and absence of endogenous isoprene in adults, disqualified its putative origin. <i>Heliyon</i> , 2021, 7, e05922.	1.4	30
44	Construction and Evaluation of a Versatile $\text{CO}_2$ Controlled Breath Collection Device. <i>IEEE Sensors Journal</i> , 2010, 10, 211-215.	2.4	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. <i>Journal of Breath Research</i> , 2015, 9, 027108.	1.5	28
46	Non-Invasive Assessment of Metabolic Adaptation in Paediatric Patients Suffering from Type 1 Diabetes Mellitus. <i>Journal of Clinical Medicine</i> , 2019, 8, 1797.	1.0	27
47	Volatile scents of influenza A and <i>S. pyogenes</i> (co-)infected cells. <i>Scientific Reports</i> , 2019, 9, 18894.	1.6	26
48	Microextraction techniques in breath biomarker analysis. <i>Bioanalysis</i> , 2014, 6, 1275-1291.	0.6	25
49	Impact of food intake on <i>in vivo</i> VOC concentrations in exhaled breath assessed in a caprine animal model. <i>Journal of Breath Research</i> , 2015, 9, 047113.	1.5	25
50	Effects of biological and methodological factors on volatile organic compound patterns during cultural growth of <i>Mycobacterium avium</i> ssp <i>paratuberculosis</i> . <i>Journal of Breath Research</i> , 2016, 10, 037103.	1.5	24
51	Continuous real-time breath analysis in ruminants: effect of eructation on exhaled VOC profiles. <i>Journal of Breath Research</i> , 2018, 12, 036014.	1.5	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. <i>Cells</i> , 2019, 8, 697.	1.8	18
53	Changes of Exhaled Volatile Organic Compounds in Postoperative Patients Undergoing Analgesic Treatment: A Prospective Observational Study. <i>Metabolites</i> , 2020, 10, 321.	1.3	18
54	Physiological and metabolic effects of healthy female aging on exhaled breath biomarkers. <i>IScience</i> , 2022, 25, 103739.	1.9	18

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55	The Effects of Prebiotic Supplementation with OMNi-LOGiC <sup>®</sup> FIBRE on Fecal Microbiome, Fecal Volatile Organic Compounds, and Gut Permeability in Murine Neuroblastoma-Induced Tumor-Associated Cachexia. <i>Nutrients</i> , 2020, 12, 2029.	1.7	17
56	Extending PTR based breath analysis to real-time monitoring of reactive volatile organic compounds. <i>Analyst</i> , 2019, 144, 7359-7367.	1.7	16
57	Volatile breath biomarkers for patient monitoring during haemodialysis. <i>Journal of Breath Research</i> , 2013, 7, 017116.	1.5	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. <i>PLoS ONE</i> , 2018, 13, e0194348.	1.1	14
60	Strategies for the identification of disease-related patterns of volatile organic compounds: prediction of paratuberculosis in an animal model using random forests. <i>Journal of Breath Research</i> , 2017, 11, 047105.	1.5	13
61	Crowd monitoring in dairy cattle—real-time VOC profiling by direct mass spectrometry. <i>Journal of Breath Research</i> , 2019, 13, 046006.	1.5	10
62	Effects of elevated oxygen levels on VOC analysis by means of PTR-ToF-MS. <i>Journal of Breath Research</i> , 2019, 13, 046004.	1.5	9
63	Adapting biomarker technologies to adverse outcome pathways (AOPs) research: current thoughts on using in vivo discovery for developing in vitro target methods. <i>Journal of Breath Research</i> , 2015, 9, 039001.	1.5	8
64	Evaluation of needle trap microextraction and solid-phase microextraction: Obtaining comprehensive information on volatile emissions from <i>in vitro</i> cultures. <i>Biomedical Chromatography</i> , 2018, 32, e4285.	0.8	8
65	Detection of <i>Mycobacterium avium</i> ssp. <i>paratuberculosis</i> in Cultures From Fecal and Tissue Samples Using VOC Analysis and Machine Learning Tools. <i>Frontiers in Veterinary Science</i> , 2021, 8, 620327.	0.9	7
66	Breath Analysis in Critically Ill Patients—Potential and Limitations. , 2013, , 155-176.		6
67	Cellular respiration, metabolomics and the search for illicit drug biomarkers in breath: report from PittCon 2017. <i>Journal of Breath Research</i> , 2017, 11, 039001.	1.5	6
68	The effects of neuroblastoma and chemotherapy on metabolism, fecal microbiome, volatile organic compounds, and gut barrier function in a murine model. <i>Pediatric Research</i> , 2019, 85, 546-555.	1.1	6
69	Insights into the Composition of a Co-Culture of 10 Probiotic Strains (OMNi BiOTiC <sup>®</sup> AAD10) and Effects of Its Postbiotic Culture Supernatant. <i>Nutrients</i> , 2022, 14, 1194.	1.7	6
70	Effects of modular ion-funnel technology onto analysis of breath VOCs by means of real-time mass spectrometry. <i>Analytical and Bioanalytical Chemistry</i> , 2020, 412, 7131-7140.	1.9	5
71	Production, Storage Stability, and Susceptibility Testing of Reuterin and Its Impact on the Murine Fecal Microbiome and Volatile Organic Compound Profile. <i>Frontiers in Microbiology</i> , 2021, 12, 699858.	1.5	5
72	Smell of cells: Volatile profiling of stem- and non-stem cell proliferation. <i>Journal of Breath Research</i> , 2018, 12, 026014.	1.5	4

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73	Versatile set-up for non-invasive <i>in vitro</i> analysis of headspace VOCs. Journal of Breath Research, 2018, 12, 041001.	1.5	4
74	Core profile of volatile organic compounds related to growth of Mycobacterium avium subspecies paratuberculosis – A comparative extract of three independent studies. PLoS ONE, 2019, 14, e0221031.	1.1	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.	1.8	3
76	Detection of Paratuberculosis in Dairy Herds by Analyzing the Scent of Feces, Alveolar Gas and Stable Air. Molecules, 2021, 26, 2854.	1.7	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.	1.7	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.	1.5	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.	1.3	0