Karl Unterkofler

List of Publications by Year
in descending order

60	2,967	185998 28	168136 53
papers	citations	h-index	g-index

61	61	61	2198
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Isoprene and acetone concentration profiles during exercise on an ergometer. Journal of Breath Research, 2009, 3, 027006.	1.5	249
2	Physiological modeling of isoprene dynamics in exhaled breath. Journal of Theoretical Biology, 2010, 267, 626-637.	0.8	160
3	Dynamic profiles of volatile organic compounds in exhaled breath as determined by a coupled PTR-MS/GC-MS study. Physiological Measurement, 2010, 31, 1169-1184.	1.2	159
4	Detecting Ventricular Fibrillation by Time-Delay Methods. IEEE Transactions on Biomedical Engineering, 2007, 54, 174-177.	2.5	157
5	Blood and breath levels of selected volatile organic compounds in healthy volunteers. Analyst, The, 2013, 138, 2134.	1.7	156
6	Measurement of endogenous acetone and isoprene in exhaled breath during sleep. Physiological Measurement, 2012, 33, 413-428.	1.2	132
7	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.	1.4	131
8	Emission rates of selected volatile organic compounds from skin of healthy volunteers. Journal of Chromatography B: Analytical Technologies in the Biomedical and Life Sciences, 2014, 959, 62-70.	1.2	123
9	Compounds enhanced in a mass spectrometric profile of smokers' exhaled breath versus non-smokers as determined in a pilot study using PTR-MS. Journal of Breath Research, 2008, 2, 026002.	1.5	119
10	Breath acetoneâ€"aspects of normal physiology related to age and gender as determined in a PTR-MS study. Journal of Breath Research, 2009, 3, 027003.	1.5	117
11	A mathematical model for breath gas analysis of volatile organic compounds with special emphasis on acetone. Journal of Mathematical Biology, 2011, 63, 959-999.	0.8	111
12	Stability of selected volatile breath constituents in Tedlar, Kynar and Flexfilm sampling bags. Analyst, The, 2013, 138, 1405.	1.7	93
13	Reliability of old and new ventricular fibrillation detection algorithms for automated external defibrillators. BioMedical Engineering OnLine, 2005, 4, 60.	1.3	92
14	A Compendium of Volatile Organic Compounds (VOCs) Released By Human Cell Lines. Current Medicinal Chemistry, 2016, 23, 2112-2131.	1.2	87
15	Breath isoprene: Muscle dystrophy patients support the concept of a pool of isoprene in the periphery of the human body. Biochemical and Biophysical Research Communications, 2012, 423, 526-530.	1.0	83
16	Release and uptake of volatile organic compounds by human hepatocellular carcinoma cells (HepG2) in vitro. Cancer Cell International, 2013, 13, 72.	1.8	73
17	ALGEBRO-GEOMETRIC SOLUTIONS OF THE BOUSSINESQ HIERARCHY. Reviews in Mathematical Physics, 1999, 11, 823-879.	0.7	72
18	Blood and breath profiles of volatile organic compounds in patients with end-stage renal disease. BMC Nephrology, 2014, 15, 43.	0.8	63

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19	A New Approach to the Boussinesq Hierarchy. Mathematische Nachrichten, 1999, 198, 51-108.	0.4	57
20	A modeling-based evaluation of isothermal rebreathing for breath gas analyses of highly soluble volatile organic compounds. Journal of Breath Research, 2012, 6, 016005.	1.5	57
21	Monitoring of Selected Skin-Borne Volatile Markers of Entrapped Humans by Selective Reagent Ionization Time of Flight Mass Spectrometry in NO⁺ Mode. Analytical Chemistry, 2014, 86, 3915-3923.	3.2	50
22	Potential of volatile organic compounds as markers of entrapped humans for use in urban search-and-rescue operations. TrAC - Trends in Analytical Chemistry, 2015, 68, 88-106.	5.8	48
23	The role of mathematical modeling in VOC analysis using isoprene as a prototypic example. Journal of Breath Research, 2011, 5, 037102.	1.5	45
24	A new ventricular fibrillation detection algorithm for automated external defibrillators. , 2005, , .		44
25	Removal of CPR Artifacts From the Ventricular Fibrillation ECG by Adaptive Regression on Lagged Reference Signals. IEEE Transactions on Biomedical Engineering, 2008, 55, 130-137.	2.5	42
26	Quantification of selected volatile organic compounds in human urine by gas chromatography selective reagent ionization time of flight mass spectrometry (GC-SRI-TOF-MS) coupled with head-space solid-phase microextraction (HS-SPME). Analyst, The, 2016, 141, 4796-4803.	1.7	38
27	Measurement of isoprene solubility in water, human blood and plasma by multiple headspace extraction gas chromatography coupled with solid phase microextraction. Journal of Breath Research, 2011, 5, 046010.	1.5	35
28	Advances Towards The Discovery of GPR55 Ligands. Current Medicinal Chemistry, 2016, 23, 2087-2100.	1.2	35
29	Exhaled methane concentration profiles during exercise on an ergometer. Journal of Breath Research, 2015, 9, 016009.	1.5	32
30	Product ion distributions for the reactions of NO+ with some physiologically significant aldehydes obtained using a SRI-TOF-MS instrument. International Journal of Mass Spectrometry, 2014, 363, 23-31.	0.7	25
31	Modeling-based determination of physiological parameters of systemic VOCs by breath gas analysis: a pilot study. Journal of Breath Research, 2015, 9, 036002.	1.5	22
32	Human Blood and Plasma Partition Coefficients for C4-C8 n-alkanes, Isoalkanes, and 1-alkenes. International Journal of Toxicology, 2012, 31, 267-275.	0.6	21
33	Quantitative analysis of volatile organic compounds released and consumed by rat L6 skeletal muscle cells in vitro. Journal of Breath Research, 2014, 8, 046003.	1.5	21
34	Analysis of Volatile Organic Compounds Liberated and Metabolised by Human Umbilical Vein Endothelial Cells (HUVEC) In Vitro. Cell Biochemistry and Biophysics, 2015, 71, 323-329.	0.9	21
35	An explicit characterization of Calogeroâ€“Moser systems. Transactions of the American Mathematical Society, 2005, 358, 603-656.	0.5	16
36	Prediction of blood:air and fat:air partition coefficients of volatile organic compounds for the interpretation of data in breath gas analysis. Journal of Breath Research, 2016, 10, 017103.	1.5	15

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37	Isospectral deformations for Strum-Liouville and Dirac-type operators and associated nonlinear evolution equations. Reports on Mathematical Physics, 1992, 31, 113-137.	0.4	13
38	Product ion distributions for the reactions of NO⁺ with some physiologically significant volatile organosulfur and organoselenium compounds obtained using a selective reagent ionization timeâ€ofâ€flight mass spectrometer. Rapid Communications in Mass Spectrometry, 2014, 28, 1683-1690.	0.7	13
39	Modeling of breath methane concentration profiles during exercise on an ergometer. Journal of Breath Research, 2016, 10, 017105.	1.5	12
40	Modeling-based determination of physiological parameters of systemic VOCs by breath gas analysis, part 2. Journal of Breath Research, 2018, 12, 036011.	1.5	12
41	PTR-MS studies of the reactions of H3O+ with a number of deuterated volatile organic compounds and the subsequent sequential reactions of the primary product ions with water under normal and humid drift tube conditions: Implications for use of deuterated compounds for breath analysis. International Journal of Mass Spectrometry, 2019, 436, 65-70.	0.7	12
42	Non-contact breath sampling for sensor-based breath analysis. Journal of Breath Research, 2019, 13, 036001.	1.5	11
43	In vitro profiling of volatile organic compounds released by Simpson-Golabi-Behmel syndrome adipocytes. Journal of Chromatography B: Analytical Technologies in the Biomedical and Life Sciences, 2019, 1104, 256-261.	1.2	10
44	Effect of inhaled acetone concentrations on exhaled breath acetone concentrations at rest and during exercise. Journal of Breath Research, 2020, 14, 026010.	1.5	10
45	Studies pertaining to the monitoring of volatile halogenated anaesthetics in breath by proton transfer reaction mass spectrometry. Journal of Breath Research, 2020, 14, 026004.	1.5	10
46	Selective monitoring of breath isoprene by a portable detector during exercise and at rest. Sensors and Actuators B: Chemical, 2022, 357, 131444.	4.0	10
47	Breath gas analysis for estimating physiological processes using anesthetic monitoring as a prototypic example. , 2011, 2011, 1001-4.		8
48	Physiological Modeling for Analysis of Exhaled Breath. , 2013, , 26-46.		8
49	Holomorphy of the scattering matrix with respect toc â^'2 for Dirac operators and an explicit treatment of relativistic corrections. Communications in Mathematical Physics, 1992, 144, 391-416.	1.0	7
50	On relativistic energy band corrections in the presence of periodic potentials. Letters in Mathematical Physics, 1988, 15, 313-324.	0.5	6
51	ON GELFANDâ€"DICKEY AND DRINFELDâ€"SOKOLOV SYSTEMS. Reviews in Mathematical Physics, 1994, 06, 227-276.	0.7	5
52	On a Theorem of Halphen and its Application to Integrable Systems. Journal of Mathematical Analysis and Applications, 2000, 251, 504-526.	0.5	4
53	Removal of resuscitation artefacts from ventricular fibrillation ECG signals using kalman methods. , 2005, , .		4
54	Product ion distributions for the reactions of NO+ with some N-containing and O-containing heterocyclic compounds obtained using SRI-TOF-MS. International Journal of Mass Spectrometry, 2015, 386, 42-46.	0.7	3

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55	Modelling of Breath and Various Blood Volatilomic Profilesâ€"Implications for Breath Volatile Analysis. Molecules, 2022, 27, 2381.	1.7	3
56	RELIABILITY OF FIBRILLATION DETECTION ALGORITHMS IN AUTOMATIC EXTERNAL DEFIBRILLATORS (AEDs). Biomedizinische Technik, 2003, 48, 216-217.	0.9	2
57	Unrecognized High Occurrence of Genetically Confirmed Hereditary Carnitine Palmitoyltransferase II Deficiency in an Austrian Family Points to the Ongoing Underdiagnosis of the Disease. Frontiers in Genetics, 2019, 10, 497.	1.1	2
58	Relativistic corrections for the scattering matrix for spherically symmetric potentials. Reports on Mathematical Physics, 2001, 47, 183-198.	0.4	0
59	Selective Breath Isoprene Detection By Filter-Enhanced Sensor. ECS Meeting Abstracts, 2021, MA2021-01, 1645-1645.	0.0	0
60	Physiological modeling of exhaled compounds. , 2020, , 43-62.		0