

Michal Roth

List of Publications by Year in descending order

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#	ARTICLE	IF	CITATIONS
1	Sensitive identification of milk protein allergens using on-line combination of transient isotachopheresis/micellar electrokinetic chromatography and capillary isoelectric focusing in fused silica capillary with roughened part. <i>Food Chemistry</i> , 2022, 377, 131986.	8.2	9
2	Fabrication of monolithic capillary columns with inner diameter 50–530 µm employing a mixture of pentaerythritol tetraacrylate and polyhedral oligomeric silsesquioxane–methacrylate as crosslinkers. <i>Journal of Separation Science</i> , 2022, 45, 3256-3263.	2.5	4
3	Classification of clinical <i>Cutibacterium acnes</i> isolates at phylotype level by capillary electrophoretic methods in roughened fused silica capillary. <i>Talanta</i> , 2022, 247, 123565.	5.5	1
4	Bacteriophage replication on permissive host cells in fused silica capillary with nanostructured part as potential of electrophoretic methods for developing phage applications. <i>Talanta</i> , 2021, 224, 121800.	5.5	2
5	Online Concentration of Bacteria from Tens of Microliter Sample Volumes in Roughened Fused Silica Capillary with Subsequent Analysis by Capillary Electrophoresis and Matrix-Assisted Laser Desorption/Ionization Time-of-Flight Mass Spectrometry. <i>ACS Infectious Diseases</i> , 2020, 6, 355-365.	3.8	16
6	Rapid Isolation, Propagation, and Online Analysis of a Small Number of Therapeutic Staphylococcal Bacteriophages from a Complex Matrix. <i>ACS Infectious Diseases</i> , 2020, 6, 2745-2755.	3.8	8
7	Identification of <i>Aspergillus</i> Conidia in Bronchoalveolar Lavage Using Offline Combination of Capillary Electrophoresis in Supercritical Water-Treated Fused Silica Capillary and Matrix-Assisted Laser Desorption/Ionization Time-of-Flight Mass Spectrometry. <i>Analytical Chemistry</i> , 2020, 92, 7588-7595.	6.5	4
8	Nano-etched fused-silica capillary used for on-line preconcentration and electrophoretic separation of bacteriophages from large blood sample volumes with off-line MALDI-TOF mass spectrometry identification. <i>Mikrochimica Acta</i> , 2020, 187, 177.	5.0	13
9	Cohesive Energy Densities Versus Internal Pressures of Near and Supercritical Fluids. <i>Molecules</i> , 2019, 24, 961.	3.8	4
10	Supercritical water-treated fused silica capillaries in analytical separations: Status review. <i>Journal of Chromatography A</i> , 2018, 1539, 1-11.	3.7	11
11	Pre-concentration and separation of bacteria by volume coupling electrophoresis on supercritical water-etched fused silica capillary with two segments of different internal diameters and inner surface roughnesses. <i>Analytical and Bioanalytical Chemistry</i> , 2018, 410, 167-175.	3.7	12
12	Bridged polysilsesquioxane-based wide-bore monolithic capillary columns for hydrophilic interaction chromatography. <i>Journal of Chromatography A</i> , 2017, 1479, 204-209.	3.7	15
13	Fused silica capillaries with two segments of different internal diameters and inner surface roughnesses prepared by etching with supercritical water and used for volume coupling electrophoresis. <i>Electrophoresis</i> , 2017, 38, 1260-1267.	2.4	17
14	Capillary electrophoresis in a fused-silica capillary with surface roughness gradient. <i>Journal of Separation Science</i> , 2016, 39, 3827-3834.	2.5	9
15	Partition Coefficients of Organics between Water and Carbon Dioxide Revisited: Correlation with Solute Molecular Descriptors and Solvent Cohesive Properties. <i>Environmental Science & Technology</i> , 2016, 50, 12857-12863.	10.0	0
16	Determination of methicillin-resistant and methicillin-susceptible <i>Staphylococcus aureus</i> bacteria in blood by capillary zone electrophoresis. <i>Analytica Chimica Acta</i> , 2015, 868, 67-72.	5.4	28
17	Partitioning of organics between ionic liquids and supercritical CO ₂ : Limiting K-factors in [bmim][N(CN) ₂]-scCO ₂ system and generalized correlation with cation- and anion-specific LSERs. <i>Journal of Supercritical Fluids</i> , 2015, 102, 133-139.	3.2	2
18	Etching of glass microchips with supercritical water. <i>Lab on A Chip</i> , 2015, 15, 311-318.	6.0	13

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19	Direct and Indirect Applications of Sub- and Supercritical Water in Food-Related Analysis. Food Engineering Series, 2015, , 269-302.	0.7	0
20	Separation of Methicillin-Resistant from Methicillin-Susceptible <i>Staphylococcus aureus</i> by Electrophoretic Methods in Fused Silica Capillaries Etched with Supercritical Water. Analytical Chemistry, 2014, 86, 9701-9708.	6.5	32
21	Solubilities of Calix[6]arene and 4- <i>tert</i> -Butylcalix[4]arene in Pressurized Hot Water. Journal of Chemical & Engineering Data, 2014, 59, 2433-2436.	1.9	3
22	Capillary isoelectric focusing of probiotic bacteria from cow's milk in tapered fused silica capillary with off-line matrix-assisted laser desorption/ionization time-of-flight mass spectrometry identification. Analytica Chimica Acta, 2013, 788, 193-199.	5.4	27
23	Solubilities of selected organic electronic materials in pressurized hot water and estimations of aqueous solubilities at 298.15K. Chemosphere, 2013, 90, 2035-2040.	8.2	7
24	Solubility of fused silica in sub- and supercritical water: Estimation from a thermodynamic model. Journal of Supercritical Fluids, 2013, 83, 72-77.	3.2	13
25	Isoelectric Focusing in Continuously Tapered Fused Silica Capillary Prepared by Etching with Supercritical Water. Analytical Chemistry, 2013, 85, 4296-4300.	6.5	12
26	Combination of Capillary Isoelectric Focusing in a Tapered Capillary with MALDI-TOF MS for Rapid and Reliable Identification of <i>Dickeya</i> Species from Plant Samples. Analytical Chemistry, 2013, 85, 6806-6812.	6.5	20
27	Near- and Supercritical Water as a Diameter Manipulation and Surface Roughening Agent in Fused Silica Capillaries. Analytical Chemistry, 2013, 85, 327-333.	6.5	20
28	Solute Partitioning Between 1- <i>n</i> -Butyl-3-methylimidazolium Trifluoromethanesulfonate Ionic Liquid and Supercritical CO ₂ . Journal of Chemical & Engineering Data, 2012, 57, 1064-1071.	1.9	8
29	Generalized linear solvation energy model applied to solute partition coefficients in ionic liquid-supercritical carbon dioxide systems. Journal of Chromatography A, 2012, 1250, 54-62.	3.7	6
30	Zwitterionic silica-based monolithic capillary columns for isocratic and gradient hydrophilic interaction liquid chromatography. Journal of Chromatography A, 2012, 1270, 178-185.	3.7	33
31	Isolation of Quaternary Benzo[<i>a</i>]phenanthridine Alkaloids from <i>Macleaya microcarpa</i> () Tj ETQq1 1 0.784314 rgBT /Overlo Extraction. Phytochemical Analysis, 2012, 23, 477-482.	2.4	11
32	Limiting Partition Coefficients of Sulfur-Containing Aromatics in a Biphasic [bmim][MeSO ₄]-Supercritical CO ₂ System. Journal of Chemical & Engineering Data, 2011, 56, 527-531.	1.9	8
33	Antioxidant activity of grape skin aqueous extracts from pressurized hot water extraction combined with electron paramagnetic resonance spectroscopy. Talanta, 2011, 85, 2233-2240.	5.5	29
34	Silica-based monolithic capillary columns—Effect of preparation temperature on separation efficiency. Journal of Chromatography A, 2010, 1217, 5737-5740.	3.7	15
35	Offline combination of pressurized fluid extraction and electron paramagnetic resonance spectroscopy for antioxidant activity of grape skin extracts assessment. Journal of Chromatography A, 2010, 1217, 7990-8000.	3.7	21
36	Solubility of Solid Ferrocene in Pressurized Hot Water. Journal of Chemical & Engineering Data, 2010, 55, 2866-2869.	1.9	9

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37	Group Contribution Correlation for Aqueous Solubilities of Solid Aromatics, Heterocycles, and Diamondoids over a 200 K Temperature Interval. <i>Industrial & Engineering Chemistry Research</i> , 2010, 49, 3485-3491.	3.7	3
38	Partitioning behaviour of organic compounds between ionic liquids and supercritical fluids. <i>Journal of Chromatography A</i> , 2009, 1216, 1861-1880.	3.7	56
39	Extraction of Bitter Acids from Hops and Hop Products Using Pressurized Solvent Extraction (PSE). <i>Journal of the Institute of Brewing</i> , 2009, 115, 220-225.	2.3	16
40	Distribution of Organic Solutes in Biphasic 1- <i>n</i> -Butyl-3-methylimidazolium Methyl Sulfate ⁺ Supercritical CO ₂ System. <i>Journal of Physical Chemistry B</i> , 2009, 113, 9520-9526.	2.6	17
41	Solubilities of Oxygenated Aromatic Solids in Pressurized Hot Water. <i>Journal of Chemical & Engineering Data</i> , 2009, 54, 1457-1461.	1.9	16
42	Solubilities of Adamantane and Diamantane in Pressurized Hot Water. <i>Journal of Chemical & Engineering Data</i> , 2008, 53, 816-819.	1.9	28
43	Simple First-Order Group Contribution Scheme for Solubilities of Solid Polycyclic Aromatic Hydrocarbons and Solid Polycyclic Aromatic Heterocycles in Pressurized Hot Water. <i>Industrial & Engineering Chemistry Research</i> , 2008, 47, 620-626.	3.7	10
44	Solubilities of Triptycene, 9-Phenylanthracene, 9,10-Dimethylanthracene, and 2-Methylanthracene in Pressurized Hot Water at Temperatures from 313 K to the Melting Point. <i>Journal of Chemical & Engineering Data</i> , 2008, 53, 160-164.	1.9	16
45	Limiting Partition Coefficients of Solutes in Biphasic Trihexyltetradecylphosphonium Chloride Ionic Liquid ⁺ Supercritical CO ₂ System: Measurement and LSER-Based Correlation. <i>Journal of Physical Chemistry B</i> , 2007, 111, 7620-7625.	2.6	17
46	Aqueous solubility data for pressurized hot water extraction for solid heterocyclic analogs of anthracene, phenanthrene and fluorene. <i>Journal of Chromatography A</i> , 2007, 1140, 195-204.	3.7	36
47	Comparison of two different solvents employed for pressurised fluid extraction of stevioside from <i>Stevia rebaudiana</i> : methanol versus water. <i>Analytical and Bioanalytical Chemistry</i> , 2007, 388, 1847-1857.	3.7	85
48	Distribution of sulfur-containing aromatics between [hmim][Tf ₂ N] and supercritical CO ₂ : a case study for deep desulfurization of oil refinery streams by extraction with ionic liquids. <i>Green Chemistry</i> , 2006, 8, 70-77.	9.0	66
49	Solubility of Solid Polycyclic Aromatic Hydrocarbons in Pressurized Hot Water at Temperatures from 313 K to the Melting Point. <i>Journal of Chemical & Engineering Data</i> , 2006, 51, 616-622.	1.9	45
50	Solubility of Solid Polycyclic Aromatic Hydrocarbons in Pressurized Hot Water: Correlation with Pure Component Properties. <i>Industrial & Engineering Chemistry Research</i> , 2006, 45, 4454-4460.	3.7	40
51	Solute Partitioning between the Ionic Liquid 1- <i>n</i> -Butyl-3-methylimidazolium Tetrafluoroborate and Supercritical CO ₂ from Capillary-Column Chromatography. <i>Journal of Physical Chemistry B</i> , 2005, 109, 15165-15171.	2.6	26
52	Determination of thermodynamic properties by supercritical fluid chromatography. <i>Journal of Chromatography A</i> , 2004, 1037, 369-391.	3.7	27
53	Partition Coefficients of Low-Volatility Solutes in the Ionic Liquid 1- <i>n</i> -Butyl-3-methylimidazolium Hexafluorophosphate ⁺ Supercritical CO ₂ System from Chromatographic Retention Measurements. <i>Journal of Physical Chemistry B</i> , 2004, 108, 11244-11249.	2.6	29
54	Interaction second virial coefficients for (CO ₂ + <i>n</i> -C _m H _{2m+2}) with (<i>m</i> =21 to 40) from supercritical fluid chromatography. <i>Journal of Chemical Thermodynamics</i> , 2003, 35, 667-675.	2.0	5

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55	Krichevskii parameters of heavy n-alkanes in carbon dioxide: comparison of the results from solubility measurements and from supercritical fluid chromatography. <i>Fluid Phase Equilibria</i> , 2003, 212, 1-9.	2.5	17
56	Direct continuous supercritical fluid extraction as a novel method of wine analysis. <i>Journal of Chromatography A</i> , 2003, 1002, 13-23.	3.7	34
57	Partition Coefficients of Environmentally Important Phenols in a Supercritical Carbon Dioxide-Water System from Cocurrent Extraction without Analysis of the Compressible Phase. <i>Analytical Chemistry</i> , 2002, 74, 4294-4299.	6.5	17
58	Solution Properties of C ₆₀ and C ₇₀ Fullerenes and C ₂₁ to C ₄₀ n-Alkanes at Infinite Dilution in Carbon Dioxide from Supercritical Fluid Chromatography. <i>Journal of Physical Chemistry B</i> , 2001, 105, 10373-10378.	2.6	9
59	Infinite-Dilution Partial Molar Properties of Naphthalene and Biphenyl in Carbon Dioxide from Supercritical Fluid Chromatography: Composition Effects in the Stationary Phase. <i>Journal of Physical Chemistry A</i> , 2000, 104, 5396-5400.	2.5	12
60	Relative Retention in Supercritical Fluid Chromatography as a Source of Partial Molar Properties. <i>Journal of Physical Chemistry B</i> , 1999, 103, 4492-4496.	2.6	5
61	Infinite-Dilution Partial Molar Properties of Azulene and Acenaphthylene in Supercritical Carbon Dioxide. <i>Journal of Physical Chemistry B</i> , 1999, 103, 8132-8136.	2.6	11
62	Partial molar properties from solute retention in supercritical fluid chromatography: thermodynamic framework, advantages, and limitations. <i>Fluid Phase Equilibria</i> , 1998, 148, 189-199.	2.5	3
63	Helium Head Pressure Carbon Dioxide in Supercritical Fluid Extraction and Chromatography: Thermodynamic Analysis of the Effects of Helium. <i>Analytical Chemistry</i> , 1998, 70, 2104-2109.	6.5	18
64	Thermodynamic Prospects of Alternative Refrigerants as Solvents for Supercritical Fluid Extraction. <i>Analytical Chemistry</i> , 1996, 68, 4474-4480.	6.5	24
65	Solute retention in gas and supercritical fluid chromatography versus pairwise interactions within the system: a numerical treatment in perturbations of molecular parameters. <i>Journal of Chromatography A</i> , 1996, 738, 101-114.	3.7	3
66	Thermodynamics of Modifier Effects in Supercritical Fluid Chromatography. <i>The Journal of Physical Chemistry</i> , 1996, 100, 2372-2375.	2.9	13
67	Thermodynamic background of selectivity shifts in temperature-programmed, constant-density supercritical fluid chromatography. <i>Journal of Chromatography A</i> , 1995, 718, 147-152.	3.7	4
68	Current Challenges in Thermodynamics of Supercritical Fluid Chromatography. , 1994, , 631-639.		0
69	Thermodynamic pitfalls in chromatography revisited: Supercritical fluid chromatography. <i>Journal of Chromatography A</i> , 1993, 641, 329-335.	3.7	5
70	Statistical thermodynamic treatment of high-pressure phase equilibria in supercritical fluid chromatography. 1. Theory. <i>The Journal of Physical Chemistry</i> , 1992, 96, 8548-8552.	2.9	15
71	Statistical thermodynamic treatment of high-pressure phase equilibria in supercritical fluid chromatography. 2. Parametrization and testing of the model. <i>The Journal of Physical Chemistry</i> , 1992, 96, 8552-8556.	2.9	19
72	Activity coefficients in binary liquid mixtures measured by reversed-flow gas chromatography. <i>Journal of Chromatography A</i> , 1992, 595, 237-246.	3.7	4

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73	Thermodynamics of poly(methylphenylsiloxane)-alkane systems by gas-liquid chromatography. <i>Macromolecules</i> , 1991, 24, 2514-2517.	4.8	14
74	Relationship between solute retention in supercritical fluid chromatography and fluctuation integrals in dilute supercritical mixtures. <i>The Journal of Physical Chemistry</i> , 1991, 95, 8-9.	2.9	10
75	Enthalpy of transfer in supercritical fluid chromatography. <i>Journal of Chromatography A</i> , 1991, 543, 262-265.	3.7	14
76	Diffusion and thermodynamic measurements by supercritical fluid chromatography. <i>Journal of Separation Science</i> , 1991, 3, 173-184.	1.0	22
77	Thermodynamics of retention in supercritical fluid chromatography: a refined model. <i>The Journal of Physical Chemistry</i> , 1990, 94, 4309-4314.	2.9	30
78	Solubility parameter of poly(dimethyl siloxane) as a function of temperature and chain length. <i>Journal of Polymer Science, Part B: Polymer Physics</i> , 1990, 28, 2715-2719.	2.1	24
79	Solute retention in supercritical fluid chromatography as a function of pressure: A thermodynamic analysis. <i>Journal of Supercritical Fluids</i> , 1990, 3, 108-114.	3.2	10
80	Thermodynamics of poly[methyl(trifluoropropyl)siloxane]-alkane systems by gas-liquid chromatography. <i>Macromolecules</i> , 1990, 23, 1696-1700.	4.8	12
81	Gaussian Concentration Profile Modified by the Column-Inlet Concentration Profile and by an Additional Exponential-Decay Process. <i>Separation Science and Technology</i> , 1989, 24, 341-351.	2.5	0
82	Column pressure drop in capillary supercritical fluid chromatography. <i>Journal of Chromatography A</i> , 1989, 465, 169-176.	3.7	14
83	Diffusion of isomeric polycyclic aromatic hydrocarbons in compressed propane. <i>The Journal of Physical Chemistry</i> , 1987, 91, 1645-1648.	2.9	15
84	Effect of sample-charge volume on the sensitivity of chromatographic analysis. <i>Analytical Chemistry</i> , 1987, 59, 1692-1695.	6.5	4
85	Thermodynamic studies into a sorption mechanism within the cross-linked polysiloxane stationary phases. <i>Analytical Chemistry</i> , 1987, 59, 1490-1494.	6.5	7
86	High-precision apparatus for physico-chemical measurements by capillary supercritical fluid chromatography. <i>Journal of Chromatography A</i> , 1987, 392, 165-174.	3.7	15
87	Effect of column inlet concentration profile on the sensitivity of analysis. <i>Journal of Chromatography A</i> , 1987, 409, 360-364.	3.7	1
88	Thermodynamics of poly(dimethylsiloxane)-alkane systems by gas-liquid chromatography. <i>Macromolecules</i> , 1986, 19, 364-369.	4.8	27
89	Evaluation of tertiary phosphate esters as stationary phases for gas-liquid chromatography. <i>Journal of Chromatography A</i> , 1984, 294, 167-173.	3.7	1
90	Sensitivity of gas chromatographic analysis on packed and capillary columns with different types of detector under resolution-normalized conditions. <i>Journal of Chromatography A</i> , 1984, 292, 149-157.	3.7	5

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91	Utilization of the solution-of-groups concept in gas-liquid chromatography. Journal of Chromatography A, 1983, 258, 23-33.	3.7	16
92	Effect of gas-phase non-ideality on the concentration of standard gaseous mixtures prepared by the saturation method. Journal of Chromatography A, 1983, 262, 305-310.	3.7	3
93	Interference effects in trapping trace components from gases on chromatographic sorbents. Journal of Chromatography A, 1983, 265, 215-221.	3.7	6
94	Correlation of two criteria of polarity for stationary phases in gas-liquid chromatography. Journal of Chromatography A, 1982, 234, 337-345.	3.7	25
95	Comparison of the distribution constants of acetone in different chromatographic sorbent-gas systems, determined by direct measurement of sorption equilibria and calculated from gas chromatographic retention data. Journal of Chromatography A, 1981, 219, 37-44.	3.7	7
96	Comparison of the distribution constants of benzene in different chromatographic sorbent-gas systems. Determined by direct measurement of sorption equilibria and calculated from gas chromatographic retention data. Journal of Chromatography A, 1981, 217, 167-175.	3.7	17
97	Correlation and quantum-chemical interpretation of electrochemical reduction of substituted β^2 -chlorovinyl ketones. Collection of Czechoslovak Chemical Communications, 1981, 46, 2782-2787.	1.0	0
98	Correlation of gas chromatographic specific retention volumes of homologous compounds with temperatures and methylene number. Journal of Chromatography A, 1980, 199, 209-216.	3.7	11