

Martin Gilar

List of Publications by Year in descending order

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76
papers

4,394
citations

147801

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106344

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docs citations

77
times ranked

3842
citing authors

#	ARTICLE	IF	CITATIONS
1	Impact of Nonspecific Adsorption to Metal Surfaces in Ion Pair-RP LC-MS Impurity Analysis of Oligonucleotides. <i>Journal of Pharmaceutical and Biomedical Analysis</i> , 2022, 208, 114439.	2.8	18
2	Effect of ion-pairing reagent hydrophobicity on liquid chromatography and mass spectrometry analysis of oligonucleotides. <i>Journal of Chromatography A</i> , 2022, 1666, 462860.	3.7	29
3	Contribution of ionic interactions to stationary phase selectivity in hydrophilic interaction chromatography. <i>Journal of Separation Science</i> , 2022, 45, 3264-3275.	2.5	11
4	Phosphorothioate oligonucleotides separation in ion-pairing reversed-phase liquid chromatography: Effect of ion-pairing system. <i>Journal of Chromatography A</i> , 2022, 1676, 463201.	3.7	11
5	Using Hybrid Organic-Inorganic Surface Technology to Mitigate Analyte Interactions with Metal Surfaces in UHPLC. <i>Analytical Chemistry</i> , 2021, 93, 5773-5781.	6.5	41
6	Characterization and comparison of mixed-mode and reversed-phase columns; interaction abilities and applicability for peptide separation. <i>Journal of Chromatography A</i> , 2021, 1648, 462182.	3.7	13
7	Mitigation of analyte loss on metal surfaces in liquid chromatography. <i>Journal of Chromatography A</i> , 2021, 1650, 462247.	3.7	25
8	Assessing the impact of nonspecific binding on oligonucleotide bioanalysis. <i>Bioanalysis</i> , 2021, 13, 1233-1244.	1.5	14
9	Utility of linear and nonlinear models for retention prediction in liquid chromatography. <i>Journal of Chromatography A</i> , 2020, 1613, 460690.	3.7	14
10	Retention loss of reversed-phase chromatographic columns using 100% aqueous mobile phases from fundamental insights to best practice. <i>Journal of Chromatography A</i> , 2020, 1612, 460662.	3.7	16
11	The effect of particle and ligand types on retention and peak shape in liquid chromatography. <i>Microchemical Journal</i> , 2020, 159, 105466.	4.5	6
12	Method for evaluation of ionic interactions in liquid chromatography. <i>Journal of Chromatography A</i> , 2020, 1625, 461301.	3.7	18
13	Evaluating MISER chromatography as a tool for characterizing HILIC column equilibration. <i>Journal of Chromatography A</i> , 2020, 1619, 460931.	3.7	8
14	Mismatch between sample diluent and eluent: Maintaining integrity of gradient peaks using in silico approaches. <i>Journal of Chromatography A</i> , 2019, 1608, 460414.	3.7	8
15	Systematic evaluation of selected supercritical fluid chromatography diol- and diethylamine-based columns for application in hydrophilic interaction liquid chromatography. <i>Separation Science Plus</i> , 2019, 2, 81-88.	0.6	9
16	Kinetic mechanism of water dewetting from hydrophobic stationary phases utilized in liquid chromatography. <i>Journal of Chromatography A</i> , 2019, 1596, 41-53.	3.7	19
17	Impact of frit dispersion on gradient performance in high-throughput liquid chromatography. <i>Journal of Chromatography A</i> , 2019, 1591, 110-119.	3.7	20
18	Chromatographic performance of microfluidic liquid chromatography devices: Experimental evaluation of straight versus serpentine packed channels. <i>Journal of Chromatography A</i> , 2018, 1533, 127-135.	3.7	5

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19	Semi-preparative high-resolution recycling liquid chromatography. <i>Journal of Chromatography A</i> , 2018, 1566, 64-78.	3.7	13
20	Performance comparison of three trypsin columns used in liquid chromatography. <i>Journal of Chromatography A</i> , 2017, 1490, 126-132.	3.7	20
21	Ideal versus real automated twin column recycling chromatography process. <i>Journal of Chromatography A</i> , 2017, 1508, 81-94.	3.7	16
22	Applications of high-resolution recycling liquid chromatography: From small to large molecules. <i>Journal of Chromatography A</i> , 2017, 1524, 108-120.	3.7	20
23	Impact of instrument and column parameters on high-throughput liquid chromatography performance. <i>Journal of Chromatography A</i> , 2017, 1523, 215-223.	3.7	16
24	Reduction of metal adducts in oligonucleotide mass spectra in ion-pair reversed-phase chromatography/mass spectrometry analysis. <i>Rapid Communications in Mass Spectrometry</i> , 2016, 30, 1667-1679.	1.5	37
25	Intrinsic advantages of packed capillaries over narrow-bore columns in very high-pressure gradient liquid chromatography. <i>Journal of Chromatography A</i> , 2016, 1451, 107-119.	3.7	12
26	Achieving quasi-adiabatic thermal environment to maximize resolution power in very high-pressure liquid chromatography: Theory, models, and experiments. <i>Journal of Chromatography A</i> , 2016, 1444, 86-98.	3.7	22
27	Experimental evaluation of chromatographic performance of capillary and microfluidic columns with linear or curved channels. <i>Journal of Chromatography A</i> , 2016, 1470, 76-83.	3.7	8
28	Maximizing performance in supercritical fluid chromatography using low-density mobile phases. <i>Journal of Chromatography A</i> , 2016, 1468, 217-227.	3.7	11
29	Bridging the gap between gas and liquid chromatography. <i>Journal of Chromatography A</i> , 2016, 1472, 107-116.	3.7	3
30	Quasi-adiabatic vacuum-based column housing for very high-pressure liquid chromatography. <i>Journal of Chromatography A</i> , 2016, 1456, 226-234.	3.7	26
31	Measurement and Modeling of Extra-Column Effects Due to Injection and Connections in Capillary Liquid Chromatography. <i>Chromatography (Basel)</i> , 2015, 2, 669-690.	1.2	30
32	Repetitive injection method: A tool for investigation of injection zone formation and its compression in microfluidic liquid chromatography. <i>Journal of Chromatography A</i> , 2015, 1381, 110-117.	3.7	16
33	Accurate measurement of dispersion data through short and narrow tubes used in very high-pressure liquid chromatography. <i>Journal of Chromatography A</i> , 2015, 1410, 118-128.	3.7	25
34	Insight into Trypsin Misleavage: Comparison of Kinetic Constants of Problematic Peptide Sequences. <i>Analytical Chemistry</i> , 2015, 87, 7636-7643.	6.5	77
35	Wide injection zone compression in gradient reversed-phase liquid chromatography. <i>Journal of Chromatography A</i> , 2015, 1390, 86-94.	3.7	20
36	Impact of the column hardware volume on resolution in very high pressure liquid chromatography non-invasive investigations. <i>Journal of Chromatography A</i> , 2015, 1420, 54-65.	3.7	25

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37	Solvent selectivity and strength in reversed-phase liquid chromatography separation of peptides. <i>Journal of Chromatography A</i> , 2014, 1337, 140-146.	3.7	13
38	Properties of two amide-based hydrophilic interaction liquid chromatography columns. <i>Journal of Separation Science</i> , 2013, 36, 2421-2429.	2.5	27
39	Comparison of Orthogonality Estimation Methods for the Two-Dimensional Separations of Peptides. <i>Analytical Chemistry</i> , 2012, 84, 8722-8732.	6.5	77
40	Retention behavior of peptides in hydrophilic-interaction chromatography. <i>Journal of Chromatography A</i> , 2011, 1218, 8890-8896.	3.7	54
41	Characterization of glycoprotein digests with hydrophilic interaction chromatography and mass spectrometry. <i>Analytical Biochemistry</i> , 2011, 417, 80-88.	2.4	65
42	Utility of Retention Prediction Model for Investigation of Peptide Separation Selectivity in Reversed-Phase Liquid Chromatography: Impact of Concentration of Trifluoroacetic Acid, Column Temperature, Gradient Slope and Type of Stationary Phase. <i>Analytical Chemistry</i> , 2010, 82, 265-275.	6.5	60
43	Separation of 2-aminobenzamide labeled glycans using hydrophilic interaction chromatography columns packed with 1.7 μ m sorbent. <i>Journal of Chromatography B: Analytical Technologies in the Biomedical and Life Sciences</i> , 2010, 878, 403-408.	2.3	182
44	Ultra-performance liquid chromatography/tandem mass spectrometry (UPLC/MS/MS) and UPLC/MS ^E analysis of RNA oligonucleotides. <i>Rapid Communications in Mass Spectrometry</i> , 2010, 24, 2631-2640.	1.5	33
45	Rapid comparison of a candidate biosimilar to an innovator monoclonal antibody with advanced liquid chromatography and mass spectrometry technologies. <i>MAbs</i> , 2010, 2, 379-394.	5.2	127
46	Comparison of 1 μ m and 2 μ m LC MS/MS methods for proteomic analysis of human serum. <i>Electrophoresis</i> , 2009, 30, 1157-1167.	2.4	48
47	Phosphopeptide enrichment using microscale titanium dioxide solid phase extraction. <i>Journal of Separation Science</i> , 2009, 32, 1189-1199.	2.5	25
48	Reversed-phase ion-pair liquid chromatography analysis and purification of small interfering RNA. <i>Analytical Biochemistry</i> , 2009, 390, 181-188.	2.4	91
49	Characterization of Protein Impurities and Site-Specific Modifications Using Peptide Mapping with Liquid Chromatography and Data Independent Acquisition Mass Spectrometry. <i>Analytical Chemistry</i> , 2009, 81, 5699-5708.	6.5	38
50	Mixed-mode chromatography for fractionation of peptides, phosphopeptides, and sialylated glycopeptides. <i>Journal of Chromatography A</i> , 2008, 1191, 162-170.	3.7	65
51	Identification of N-Linked Glycosylation Sites Using Glycoprotein Digestion with Pronase Prior to MALDI Tandem Time-of-Flight Mass Spectrometry. <i>Analytical Chemistry</i> , 2007, 79, 1731-1738.	6.5	49
52	Peak capacity in gradient reversed-phase liquid chromatography of biopolymers. <i>Journal of Chromatography A</i> , 2007, 1169, 139-150.	3.7	78
53	Peptide retention prediction applied to proteomic data analysis. <i>Rapid Communications in Mass Spectrometry</i> , 2007, 21, 2813-2821.	1.5	37
54	A comparison of sample preparation methods for the study of the human serum proteome. <i>FASEB Journal</i> , 2006, 20, .	0.5	0

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55	Two-dimensional separation of peptides using RP-RP-HPLC system with different pH in first and second separation dimensions. <i>Journal of Separation Science</i> , 2005, 28, 1694-1703.	2.5	412
56	A rapid sample preparation method for mass spectrometric characterization of N-linked glycans. <i>Rapid Communications in Mass Spectrometry</i> , 2005, 19, 2331-2336.	1.5	86
57	Orthogonality of Separation in Two-Dimensional Liquid Chromatography. <i>Analytical Chemistry</i> , 2005, 77, 6426-6434.	6.5	726
58	A complete peptide mapping of membrane proteins: a novel surfactant aiding the enzymatic digestion of bacteriorhodopsin. <i>Rapid Communications in Mass Spectrometry</i> , 2004, 18, 711-715.	1.5	52
59	Electrospray ionization mass spectrometric analysis of nucleic acids using high-throughput on-line desalting. <i>Rapid Communications in Mass Spectrometry</i> , 2004, 18, 1295-1302.	1.5	24
60	Implications of column peak capacity on the separation of complex peptide mixtures in single- and two-dimensional high-performance liquid chromatography. <i>Journal of Chromatography A</i> , 2004, 1061, 183-192.	3.7	157
61	Purification of dye-labeled oligonucleotides by ion-pair reversed-phase high-performance liquid chromatography. <i>Journal of Chromatography B: Analytical Technologies in the Biomedical and Life Sciences</i> , 2003, 783, 61-72.	2.3	22
62	Analysis of native and chemically modified oligonucleotides by tandem ion-pair reversed-phase high-performance liquid chromatography/electrospray ionization mass spectrometry. <i>Rapid Communications in Mass Spectrometry</i> , 2003, 17, 646-653.	1.5	111
63	Enzyme-Friendly, Mass Spectrometry-Compatible Surfactant for In-Solution Enzymatic Digestion of Proteins. <i>Analytical Chemistry</i> , 2003, 75, 6023-6028.	6.5	296
64	Characterization of Therapeutic Oligonucleotides Using Liquid Chromatography with On-line Mass Spectrometry Detection. <i>Oligonucleotides</i> , 2003, 13, 229-243.	2.7	93
65	Design of a fraction collector for capillary array electrophoresis. <i>Electrophoresis</i> , 2002, 23, 35.	2.4	31
66	Ion-pair reversed-phase high-performance liquid chromatography analysis of oligonucleotides. <i>Journal of Chromatography A</i> , 2002, 958, 167-182.	3.7	181
67	Analysis and Purification of Synthetic Oligonucleotides by Reversed-Phase High-Performance Liquid Chromatography with Photodiode Array and Mass Spectrometry Detection. <i>Analytical Biochemistry</i> , 2001, 298, 196-206.	2.4	108
68	High-throughput biopolymer desalting by solid-phase extraction prior to mass spectrometric analysis. <i>Journal of Chromatography A</i> , 2001, 921, 3-13.	3.7	67
69	Advances in sample preparation in electromigration, chromatographic and mass spectrometric separation methods. <i>Journal of Chromatography A</i> , 2001, 909, 111-135.	3.7	113
70	Polymer solutions as a pseudostationary phase for capillary electrochromatographic separation of DNA diastereomers. <i>Electrophoresis</i> , 2000, 21, 2999-3009.	2.4	24
71	Purification of crude DNA oligonucleotides by solid-phase extraction and reversed-phase high-performance liquid chromatography. <i>Journal of Chromatography A</i> , 2000, 890, 167-177.	3.7	62
72	Study of phosphorothioate-modified oligonucleotide resistance to 3'â€²-exonuclease using capillary electrophoresis. <i>Biomedical Applications</i> , 1998, 714, 13-20.	1.7	34

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73	Nucleic Acids and Their Constituents. <i>Journal of Chromatography Library</i> , 1998, 60, 575-607.	0.1	1
74	Impact of 3'-Exonuclease Stereoselectivity on the Kinetics of Phosphorothioate Oligonucleotide Metabolism. <i>Oligonucleotides</i> , 1998, 8, 35-42.	4.3	36
75	Structural study of flobufen II. An unexpected role of packing effects on the dihedral angle of phenyl rings in crystal structures of 2,4-difluorobiphenyls. <i>Journal of Fluorine Chemistry</i> , 1997, 83, 111-116.	1.7	5
76	Development of Orthogonal 2DLC Methods for Separation of Peptides. , 0, , 261-289.		2