Barry K Lavine

List of Publications by Year
in descending order

98 papers	2,518 citations	236833 25 h-index	233338 45 g-index
103 all docs	103 docs citations	103 times ranked	2054 citing authors

#	Article	IF	Citations
1	Chemometrics. Analytical Chemistry, 1996, 68, 21-62.	3.2	132
2	Temporal changes in colony cuticular hydrocarbon patterns ofSolenopsis invicta. Journal of Chemical Ecology, 1989, 15, 2115-2125.	0.9	130
3	Ontogeny of nestmate recognition cues in the red carpenter ant (Camponotus floridanus). Behavioral Ecology and Sociobiology, 1988, 22, 175-183.	0.6	113
4	Chemometrics. Analytical Chemistry, 1998, 70, 209-228.	3.2	111
5	Chemometrics. Analytical Chemistry, 2000, 72, 91-98.	3.2	94
6	Chemometrics. Analytical Chemistry, 2008, 80, 4519-4531.	3.2	90
7	Chemometrics. Analytical Chemistry, 2010, 82, 4699-4711.	3.2	85
8	Multiarray Sensors with Pattern Recognition for the Detection, Classification, and Differentiation of Bacteria at Subspecies and Strain Levels. Analytical Chemistry, 2005, 77, 7941-7949.	3.2	83
9	Chemometrics. Analytical Chemistry, 2013, 85, 705-714.	3.2	79
10	Chemometrics. Analytical Chemistry, 2004, 76, 3365-3372.	3.2	68
11	Chemometrics. Analytical Chemistry, 2002, 74, 2763-2770.	3.2	63
12	Detection and identification of bacteria using antibiotic susceptibility and a multi-array electrochemical sensor with pattern recognition. Biosensors and Bioelectronics, 2007, 22, 2643-2649.	5.3	63
13	Changes in the cuticular hydrocarbon profile of the slave-maker ant queen, Polyergus breviceps emery, after killing a Formica host queen (Hymenoptera: Formicidae). Journal of Chemical Ecology, 2001, 27, 1787-1804.	0.9	60
14	Source Identification of Underground Fuel Spills by Pattern Recognition Analysis of High-Speed Gas Chromatograms. Analytical Chemistry, 1995, 67, 3846-3852.	3.2	58
15	Chemometrics. Analytical Chemistry, 2006, 78, 4137-4145.	3.2	51
16	Application of pyrolysis/gas chromatography/pattern recognition to the detection of cystic fibrosis heterozygotes. Analytical Chemistry, 1985, 57, 295-302.	3.2	46
17	Liquid chromatography-mass spectrometry identification of imidacloprid photolysis products. Microchemical Journal, 2011, 99, 535-541.	2.3	46
18	Pattern recognition analysis of differential mobility spectra with classification by chemical family. Analytica Chimica Acta, 2006, 579, 1-10.	2.6	41

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19	Electronic van der Waals Surface Property Descriptors and Genetic Algorithms for Developing Structureâˆ¼Activity Correlations in Olfactory Databases. Journal of Chemical Information and Computer Sciences, 2003, 43, 1890-1905.	2.8	36
20	Machine Learning Based Pattern Recognition Applied to Microarray Data. Combinatorial Chemistry and High Throughput Screening, 2004, 7, 115-131.	0.6	35
21	Structure-activity studies of musk odorants using pattern recognition: bicyclo- and tricyclo-benzenoids. Chemical Senses, 1986, 11, 145-156.	1.1	32
22	Do these eggs smell funny to you?: an experimental study of egg discrimination by hosts of the social parasite Polyergus breviceps (Hymenoptera: Formicidae). Behavioral Ecology and Sociobiology, 2005, 57, 245-255.	0.6	32
23	Swellable molecularly imprinted polyN-(N-propyl)acrylamide particles for detection of emerging organic contaminants using surface plasmon resonance spectroscopy. Talanta, 2007, 72, 1042-1048.	2.9	31
24	Pattern Recognition-Assisted Infrared Library Searching of Automotive Clear Coats. Applied Spectroscopy, 2015, 69, 84-94.	1.2	28
25	Wavelets and genetic algorithms applied to search prefilters for spectral library matching in forensics. Talanta, 2011, 87, 46-52.	2.9	27
26	A genetic algorithm for pattern recognition analysis of pyrolysis gas chromatographic data. Journal of Analytical and Applied Pyrolysis, 1999, 50, 47-62.	2.6	26
27	Genetic Algorithms Applied to Pattern Recognition Analysis of High-Speed Gas Chromatograms of Aviation Turbine Fuels Using an Integrated Jet-A/JP-8 Database. Microchemical Journal, 1999, 61, 69-78.	2.3	24
28	Identification and Quantitative Analysis of Acetaminophen, Acetylsalicylic Acid, and Caffeine in Commercial Analgesic Tablets by LCâˆ¼MS. Journal of Chemical Education, 2010, 87, 838-841.	1.1	24
29	One stop shopping: feature selection, classification and prediction in a single step. Journal of Chemometrics, 2011, 25, 116-129.	0.7	24
30	Search prefilters for midâ€infrared absorbance spectra of clear coat automotive paint smears using stacked and linear classifiers. Journal of Chemometrics, 2014, 28, 385-394.	0.7	24
31	Development of search prefilters for infrared library searching of clear coat paint smears. Talanta, 2014, 119, 331-340.	2.9	24
32	Band Broadening in Micellar Liquid Chromatography. Journal of Liquid Chromatography and Related Technologies, 1996, 19, 101-123.	0.5	23
33	Spectral Pattern Recognition Using Self-Organizing MAPS. Journal of Chemical Information and Computer Sciences, 2004, 44, 1056-1064.	2.8	23
34	New Approaches to Chemical Sensingâ€Sensors Based on Polymer Swelling. Analytical Letters, 2006, 39, 1773-1783.	1.0	23
35	LC-PDA-MS Studies of the Photochemical Degradation of Imidacloprid. Analytical Letters, 2010, 43, 1812-1821.	1.0	21
36	Enhancement of selectivity in reversed-phase liquid chromatography. Journal of Chromatography A, 2002, 946, 83-90.	1.8	20

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37	Odor-Structure Relationship Studies of Tetralin and Indan Musks. Chemical Senses, 2012, 37, 723-736.	1.1	20
38	Prediction of mold contamination from microbial volatile organic compound profiles using solid phase microextraction and gas chromatography/mass spectrometry. Microchemical Journal, 2012, 103, 37-41.	2.3	20
39	Pattern Recognition-Assisted Infrared Library Searching of the Paint Data Query Database to Enhance Lead Information from Automotive Paint Trace Evidence. Applied Spectroscopy, 2017, 71, 480-495.	1.2	19
40	pH sensing using whispering gallery modes of a silica hollow bottle resonator. Talanta, 2019, 194, 585-590.	2.9	19
41	Classification of the waxy condition of durum wheat by near infrared reflectance spectroscopy using wavelets and a genetic algorithm. Microchemical Journal, 2014, 117, 178-182.	2.3	18
42	Search prefilters for library matching of infrared spectra in the PDQ database using the autocorrelation transformation. Microchemical Journal, 2014, 113, 30-35.	2.3	18
43	Pattern Recognition Assisted Infrared Library Searching. Applied Spectroscopy, 2012, 66, 917-925.	1.2	17
44	Forensic analysis of automotive paints using a pattern recognition assisted infrared library searching system: Ford (2000â€"2006). Microchemical Journal, 2016, 129, 173-183.	2.3	17
45	Criteria for comparing infrared spectra â€" A review of the forensic and analytical chemistry literature. Forensic Chemistry, 2020, 18, 100224.	1.7	17
46	Identification of Africanized honeybees. Journal of Chromatography A, 2005, 1096, 69-75.	1.8	16
47	Authentication of edible oils using Fourier transform infrared spectroscopy and pattern recognition methods. Chemometrics and Intelligent Laboratory Systems, 2021, 210, 104251.	1.8	16
48	European bee or Africanized bee? Species identification through chemical analysis. Analytical Chemistry, 1987, 59, 468A-470A.	3.2	15
49	Search prefilters to assist in library searching of infrared spectra of automotive clear coats. Talanta, 2015, 132, 182-190.	2.9	15
50	Development and validation of high performance liquid chromatographic method for determination of gentisic acid and related Renal Cell Carcinoma biomarkers in urine. Microchemical Journal, 2018, 137, 85-89.	2.3	15
51	Fuel Spill Identification by Gas Chromatography - Genetic Algorithms/Pattern Recognition Techniques. Analytical Letters, 1998, 31, 2805-2822.	1.0	14
52	Varimax extended rotation applied to multivariate spectroscopic image analysis. Microchemical Journal, 2004, 76, 173-180.	2.3	14
53	Construction of an inexpensive surface plasmon resonance instrument for use in teaching and research. Microchemical Journal, 2007, 86, 147-155.	2.3	14
54	Analysis of vanilla extract by reversed phase liquid chromatography using water rich mobile phases. Microchemical Journal, 2012, 103, 49-61.	2.3	14

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55	Evidential significance of automotive paint trace evidence using a pattern recognition based infrared library search engine for the Paint Data Query Forensic Database. Talanta, 2016, 159, 317-329.	2.9	14
56	Library Search Prefilters for Vehicle Manufacturers to Assist in the Forensic Examination of Automotive Paints. Applied Spectroscopy, 2018, 72, 476-488.	1.2	14
57	Differentiation of Edible Oils by Type Using Raman Spectroscopy and Pattern Recognition Methods. Applied Spectroscopy, 2020, 74, 645-654.	1.2	14
58	Multivariate curve resolution in liquid chromatographyâ€"resolving two-way multi-component data using a Varimax extended rotation. Microchemical Journal, 2002, 72, 163-178.	2.3	13
59	Host queen killing by a slave-maker ant queen: when is a host queen worth attacking?. Animal Behaviour, 2002, 64, 807-815.	0.8	13
60	Simulation of Attenuated Total Reflection Infrared Absorbance Spectra: Applications to Automotive Clear Coat Forensic Analysis. Applied Spectroscopy, 2014, 68, 608-615.	1.2	13
61	Transmission infrared imaging microscopy and multivariate curve resolution applied to the forensic examination of automotive paints. Talanta, 2018, 186, 662-669.	2.9	13
62	Development of carboxylic acid search prefilters for spectral library matching. Microchemical Journal, 2012, 103, 21-36.	2.3	12
63	Incorporating brand variability into classification of edible oils by Raman spectroscopy. Journal of Chemometrics, 2020, 34, e3173.	0.7	12
64	Separation of imidacloprid and its degradation products using reversed phase liquid chromatography with water rich mobile phases. Journal of Chromatography A, 2011, 1218, 9221-9226.	1.8	11
65	False color data imaging: A new pattern recognition technique for analyzing chromatographic profile data. Microchemical Journal, 1990, 41, 288-295.	2.3	9
66	Selectivity in Micellar Liquid Chromatography: Surfactant Bonded Phase Interactions. II. C-8 and Cyanopropyl. Journal of Liquid Chromatography and Related Technologies, 1997, 20, 377-402.	0.5	9
67	Selectivity in Micellar Liquid Chromatography. ACS Symposium Series, 1999, , 290-313.	0.5	9
68	Chemometrics: Past, Present, and Future. ACS Symposium Series, 2005, , 1-13.	0.5	9
69	Prediction of mold contamination from microbial volatile organic compound profiles using head space gas chromatography/mass spectrometry. Microchemical Journal, 2012, 103, 119-124.	2.3	9
70	1,6- And 1,7-Regioisomers of Perylene Tetracarboxylic Dianhydride and Diimide: The Effects of Neutral Bay Substituents on the Electrochemical and Structural Properties. Phosphorus, Sulfur and Silicon and the Related Elements, 2014, 189, 738-752.	0.8	9
71	Boosting the Performance of Genetic Algorithms for Variable Selection in Partial Least Squares Spectral Calibrations. Applied Spectroscopy, 2017, 71, 2092-2101.	1.2	9
72	<title>Genetic algorithms for pattern recognition analysis and fusion of sensor data</title>. , 1999, 3854, 103.		8

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73	Application of gas chromatography/pattern recognition techniques to the problem of identifying Africanized honeybees. Microchemical Journal, 1989, 39, 308-316.	2.3	7
74	Pattern recognition studies in chemical communication: Nestmate recognition in Camponotus floridanus. Chemometrics and Intelligent Laboratory Systems, 1990, 9, 107-114.	1.8	7
75	Selectivity in Micellar Liquid Chromatography: Surfactant Bondee Phase Interactions. I. C-18. Journal of Liquid Chromatography and Related Technologies, 1997, 20, 351-376.	0.5	7
76	Multivariate classification of disease phenotypes of esophageal adenocarcinoma by pattern recognition analysis of MALDI-TOF mass spectra of serum N-linked glycans. Microchemical Journal, 2017, 132, 83-88.	2.3	6
77	Comparison of Spectroscopic Techniques for Determining the Peroxide Value of 19 Classes of Naturally Aged, Plant-Based Edible Oils. Applied Spectroscopy, 2021, 75, 000370282199450.	1.2	6
78	MODELING SOLUTE TRANSPORT IN MICELLAR LIQUID CHROMATOGRAPHY. Separation Science and Technology, 2002, 37, 3443-3464.	1.3	5
79	Analysis of chemical signals in red fire ants by gas chromatography and pattern recognition techniques. Talanta, 2011, 83, 1308-1316.	2.9	5
80	Development of Infrared Library Search Prefilters for Automotive Clear Coats from Simulated Attenuated Total Reflection (ATR) Spectra. Applied Spectroscopy, 2018, 72, 886-895.	1.2	5
81	Chemometric Methods for Estimating the Strain Hardening Modulus in Polyethylene Resins. Applied Spectroscopy, 2018, 72, 463-475.	1.2	5
82	Gluten Conformation at Different Temperatures and Additive Treatments. Foods, 2022, 11, 430.	1.9	5
83	Transmission Infrared Microscopy and Machine Learning Applied to the Forensic Examination of Original Automotive Paint. Applied Spectroscopy, 2022, 76, 118-131.	1.2	5
84	Application of infrared microscopy and alternating least squares to the forensic analysis of automotive paint chips. Journal of Chemometrics, 2021, 35, .	0.7	4
85	Genetic Algorithms for Classification of Olfactory Stimulants. Methods in Molecular Biology, 2004, 275, 399-425.	0.4	3
86	Swellable Copolymers of N-isopropylacrylamide and Alkyl Acrylic Acids for Optical pH Sensing. Molecules, 2020, 25, 1408.	1.7	3
87	Synthesis and Characterization of N-Isopropylacrylamide Microspheres as pH Sensors. Sensors, 2021, 21, 6493.	2.1	3
88	Characterization of Swellable Molecularly Imprinted Polymer Particles by Surface Plasmon Resonance Spectroscopy. Applied Spectroscopy, 2012, 66, 440-446.	1.2	2
89	Improving Investigative Lead Information in the Forensic Examination of Automotive Paints. ACS Symposium Series, 2015, , 195-220.	0.5	2
90	Analysis of gentisic acid and related renal cell carcinoma biomarkers using reversed-phase liquid chromatography with water-rich mobile phases. Journal of Liquid Chromatography and Related Technologies, 2019, 42, 681-687.	0.5	2

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91	Chemometrics in forensic science. Journal of Chemometrics, 2021, 35, e3322.	0.7	2
92	Analysis of chemical signals in red fire ants by gas chromatography and pattern recognition techniques. Talanta, 2010, 83, 216-224.	2.9	1
93	Development of field-deployable instrumentation based on â€œantigenâ€"antibodyâ€•reactions for detection of hemorrhagic disease in ruminants. Microchemical Journal, 2011, 99, 415-420.	2.3	1
94	EXPRESS: Comparison of Spectroscopic Techniques for Determining the Peroxide Value of 19 Classes of Naturally Aged, Plant-Based Edible Oils. Applied Spectroscopy, 2020, , 000370282097470.	1.2	1
95	Application of Micellar Liquid Chromatography to Modeling of Organic Compounds by Quantitative Structureâ€"Activity Relationships. ACS Symposium Series, 1989, , 123-131.	0.5	0
96	The effect of mislabeled samples on the performance of the linear learning machine. Journal of Chemometrics, 1990, 4, 47-50.	0.7	0
97	Analysis of Odor Structure Relationships Using Electronic Van Der Waals Surface Property Descriptors and Genetic Algorithms. ACS Symposium Series, 2005, , 127-143.	0.5	0
98	Odor-Structure Relationship Studies of Indan, Tetralin, and Isochroman Musks. ACS Symposium Series, 2015, , 333-359.	0.5	0