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Chemometrics

Analytical Chemistry

Deep Learning

	All	Since 2016
Citations	2145	1641
h-index	19	19
i10-index	44	39

23 articles

9 articles

not available

available

Based on funding mandates

TITLE	CITED BY	YEAR
Baseline correction using adaptive iteratively reweighted penalized least squares ZM Zhang, S Chen, YZ Liang Analyst 135 (5), 1138-1146	506	2010
An intelligent background-correction algorithm for highly fluorescent samples in Raman spectroscopy ZM Zhang, S Chen, YZ Liang, ZX Liu, QM Zhang, LX Ding, F Ye, H Zhou Journal of Raman Spectroscopy 41 (6), 659-669	264	2009
Deep-learning-based drug-target interaction prediction M Wen, Z Zhang, S Niu, H Sha, R Yang, Y Yun, H Lu Journal of proteome research 16 (4), 1401-1409	218	2017
Application of random forests to select premium quality vegetable oils by their fatty acid composition F Ai, J Bin, Z Zhang, J Huang, J Wang, Y Liang, L Yu, Z Yang Food chemistry 143, 472-478	95	2014
Peak alignment using wavelet pattern matching and differential evolution ZM Zhang, S Chen, YZ Liang Talanta 83 (4), 1108-1117	75	2011
Morphological weighted penalized least squares for background correction Z Li, DJ Zhan, JJ Wang, J Huang, QS Xu, ZM Zhang, YB Zheng, YZ Liang, ... Analyst 138 (16), 4483-4492	62	2013
Multiscale peak alignment for chromatographic datasets ZM Zhang, YZ Liang, HM Lu, BB Tan, XN Xu, M Ferro Journal of Chromatography A	60	2011
Deep learning-based component identification for the Raman spectra of mixtures X Fan, W Ming, H Zeng, Z Zhang, H Lu Analyst 144 (5), 1789-1798	42	2019
Comparisons of five algorithms for chromatogram alignment W Jiang, ZM Zhang, YH Yun, DJ Zhan, YB Zheng, YZ Liang, ZY Yang, ... Chromatographia 76 (17-18), 1067-1078	41	2013
Calibration transfer via an extreme learning machine auto-encoder WR Chen, J Bin, HM Lu, ZM Zhang, YZ Liang Analyst 141 (6), 1973-1980	37	2016
Multiscale peak detection in wavelet space ZM Zhang, X Tong, Y Peng, P Ma, MJ Zhang, HM Lu, XQ Chen, YZ Liang Analyst 140 (23), 7955-7964	35	2015

TITLE	CITED BY	YEAR
DeepMirTar: a deep-learning approach for predicting human miRNA targets M Wen, P Cong, Z Zhang, H Lu, T Li Bioinformatics 34 (22), 3781-3787	34	2018
Classification of green and black teas by PCA and SVM analysis of cyclic voltammetric signals from metallic oxide-modified electrode N Liu, Y Liang, J Bin, Z Zhang, J Huang, RX Shu, K Yang Food Analytical Methods 7 (2), 472-480	34	2014
Baseline correction of high resolution spectral profile data based on exponential smoothing X Liu, Z Zhang, Y Liang, PFM Sousa, Y Yun, L Yu Chemometrics and Intelligent Laboratory Systems 139, 97-108	32	2014
Selective iteratively reweighted quantile regression for baseline correction X Liu, Z Zhang, PFM Sousa, C Chen, M Ouyang, Y Wei, Y Liang, Y Chen, ... Analytical and bioanalytical chemistry 406 (7), 1985-1998	31	2014
Representative subset selection and outlier detection via isolation forest WR Chen, YH Yun, M Wen, HM Lu, ZM Zhang, YZ Liang Analytical methods 8 (39), 7225-7231	28	2016
Application of Fast Fourier Transform Cross-Correlation and Mass Spectrometry Data for Accurate Alignment of Chromatograms YB Zheng, ZM Zhang, YZ Liang, DJ Zhan, JH Huang, YH Yun, HL Xie Journal of Chromatography A	28	2013
Raman spectroscopy fluorescence background correction and its application in clustering analysis of medicines S Chen, X Li, Y Liang, Z Zhang, Z Liu, Q Zhang, L Ding, F Ye Spectroscopy and Spectral Analysis 30 (8), 2157-2160	23	2010
Deep MS/MS-aided structural-similarity scoring for unknown metabolite identification H Ji, Y Xu, H Lu, Z Zhang Analytical chemistry 91 (9), 5629-5637	21	2019
Synthesis of multi-Au-nanoparticle-embedded mesoporous silica microspheres as self-filtering and reusable substrates for SERS detection M Chen, W Luo, Z Zhang, R Wang, Y Zhu, H Yang, X Chen ACS applied materials & interfaces 9 (48), 42156-42166	19	2017
Comments on the Baseline Removal Method Based on Quantile Regression and Comparison of Several Methods ZM Zhang, YZ Liang Chromatographia 75 (5), 313-314	19	2012
The rapid determination of total polyphenols content and antioxidant activity in Dendrobium officinale using near-infrared spectroscopy L Ma, Z Zhang, X Zhao, S Zhang, H Lu Analytical Methods 8 (23), 4584-4589	18	2016
Identification of terpenoids from Ephedra combining with accurate mass and in-silico retention indices M He, J Yan, D Cao, S Liu, C Zhao, Y Liang, Y Li, Z Zhang Talanta 103, 116-122	18	2013

TITLE	CITED BY	YEAR
In situ fabrication of label-free optical sensing paper strips for the rapid surface-enhanced Raman scattering (SERS) detection of brassinosteroids in plant tissues M Chen, Z Zhang, M Liu, C Qiu, H Yang, X Chen Talanta 165, 313-320	17	2017
Sensitive surface enhanced Raman spectroscopy (SERS) detection of methotrexate by core-shell-satellite magnetic microspheres M Chen, W Luo, Z Zhang, F Zhu, S Liao, H Yang, X Chen Talanta 171, 152-158	16	2017
Qualitative analysis of major constituents from Xue Fu Zhu Yu Decoction using ultra high performance liquid chromatography with hybrid ion trap time-of-flight mass spectrometry C Fu, Z Xia, Y Liu, H Lu, Z Zhang, Y Wang, X Fan Journal of separation science 39 (17), 3457-3468	16	2016
Simultaneous determination of neutral and uronic sugars based on UV-vis spectrometry combined with PLS CH Zhang, YH Yun, ZM Zhang, YZ Liang International journal of biological macromolecules 87, 290-294	15	2016
Chromatographic fingerprinting and chemometric techniques for quality control of herb medicines Z Zhang, Y Liang, P Xie, F Chau, K Chan Data analytics for traditional chinese medicine research, 133-153	15	2014
Absolute quantitative imaging of sphingolipids in brain tissue by exhaustive liquid microjunction surface sampling-liquid chromatography-mass spectrometry Q Wu, Z Huang, Y Wang, Z Zhang, H Lu Journal of Chromatography A 1609, 460436	14	2020
Core-shell-satellite microspheres-modified glass capillary for microsampling and ultrasensitive SERS spectroscopic detection of methotrexate in serum M Chen, J Tang, W Luo, Z Zhang, Y Zhu, R Wang, H Yang, X Chen Sensors and Actuators B: Chemical 275, 267-276	14	2018
A modified multiscale peak alignment method combined with trilinear decomposition to study the volatile/heat-labile components in Ligusticum chuanxiong Hort-Cyperus rotundus ... M He, P Yan, ZY Yang, ZM Zhang, TB Yang, L Hong Journal of Chromatography B 1079, 41-50	14	2018
Automatic standardization method for Raman spectrometers with applications to pharmaceuticals H Chen, ZM Zhang, L Miao, DJ Zhan, YB Zheng, Y Liu, F Lu, YZ Liang Journal of Raman Spectroscopy 46 (1), 147-154	14	2015
Recursive wavelet peak detection of analytical signals X Tong, Z Zhang, F Zeng, C Fu, P Ma, Y Peng, H Lu, Y Liang Chromatographia 79 (19), 1247-1255	13	2016

TITLE	CITED BY	YEAR
Nonlinear alignment of chromatograms by means of moving window fast Fourier transform cross-correlation Z Li, JJ Wang, J Huang, ZM Zhang, HM Lu, YB Zheng, DJ Zhan, YZ Liang Journal of separation science 36 (9-10), 1677-1684	13	2013
Direct calibration transfer to principal components via canonical correlation analysis X Fan, H Lu, Z Zhang Chemometrics and Intelligent Laboratory Systems 181, 21-28	12	2018
KPIC2: an effective framework for mass spectrometry-based metabolomics using pure ion chromatograms H Ji, F Zeng, Y Xu, H Lu, Z Zhang Analytical chemistry 89 (14), 7631-7640	12	2017
Mixture analysis using reverse searching and non-negative least squares ZM Zhang, XQ Chen, HM Lu, YZ Liang, W Fan, D Xu, J Zhou, F Ye, ... Chemometrics and Intelligent Laboratory Systems 137, 10-20	12	2014
Joint MS-based platforms for comprehensive comparison of rat plasma and serum metabolic profiling Z Lin, Z Zhang, H Lu, Y Jin, L Yi, Y Liang Biomedical Chromatography 28 (9), 1235-1245	12	2014
Comprehensive metabolic profiles of seminal plasma with different forms of male infertility and their correlation with sperm parameters Y Xu, H Lu, Y Wang, Z Zhang, Q Wu Journal of pharmaceutical and biomedical analysis 177, 112888	11	2020
UPLC-ESI-IT-TOF-MS metabolomic study of the therapeutic effect of Xuefu Zhuyu decoction on rats with traumatic brain injury C Fu, Q Wu, Z Zhang, Z Xia, H Ji, H Lu, Y Wang Journal of ethnopharmacology 245, 112149	11	2019
Feature extraction from resolution perspective for gas chromatography-mass spectrometry datasets P Ma, Z Zhang, X Zhou, Y Yun, Y Liang, H Lu RSC advances 6 (115), 113997-114004	11	2016
Simultaneous determination of lead and tin at the bismuth film electrode by square wave stripping voltammetry and chemometric methods W Tang, J Bin, W Fan, Z Zhang, Y Yun, Y Liang Analytical Methods 8 (27), 5475-5486	11	2016
Multi-core computing: A novel accelerating method for chemometrics calculation ZM Zhang, YZ Liang, QS Xu Chemometrics and Intelligent Laboratory Systems 96 (1), 94-97	11	2009
Predicting a molecular fingerprint from an electron ionization mass spectrum with deep neural networks H Ji, H Deng, H Lu, Z Zhang Analytical Chemistry 92 (13), 8649-8653	10	2020

TITLE	CITED BY	YEAR
Application of Subwindow Factor Analysis and Mass Spectral information for accurate alignment of non-targeted metabolic profiling TB Yang, P Yan, M He, L Hong, R Pei, ZM Zhang, LZ Yi, XY Yuan Journal of Chromatography A 1563, 162-170	9	2018
Application of sparse linear discriminant analysis for metabolomics data M Ouyang, Z Zhang, C Chen, X Liu, Y Liang Analytical methods 6 (22), 9037-9044	9	2014
Pure ion chromatogram extraction via optimal k-means clustering H Ji, H Lu, Z Zhang RSC advances 6 (62), 56977-56985	8	2016
Supervised principal components: a new method for multivariate spectral analysis J Bin, FF Ai, N Liu, ZM Zhang, YZ Liang, RX Shu, K Yang Journal of Chemometrics 27 (12), 457-465	8	2013
Evaluation and prediction of the antioxidant activity of Epimedium from multi-wavelength chromatographic fingerprints and chemometrics L Zhang, Z Zhang, Q Luo, H Lu, Y Liang Analytical Methods 6 (4), 1036-1043	7	2014
Unitary and binary chromatographic fingerprints analysis of Epimedium L Zhang, Z Zhang, J Huang, Y Jin, H Lu Analytical Methods 5 (19), 5331-5338	7	2013
Characterizing semen abnormality male infertility using non-targeted blood plasma metabolomics P Ma, Z Zhang, X Zhou, J Luo, H Lu, Y Wang PloS one 14 (7), e0219179	6	2019
GC-MS profiling of leukemia cells: an optimized preparation protocol for the intracellular metabolome Y He, ZM Zhang, P Ma, HC Ji, HM Lu Analytical Methods 10 (10), 1266-1274	6	2018
Shrunken centroids regularized discriminant analysis as a promising strategy for metabolomics data exploration C Chen, ZM Zhang, ML Ouyang, X Liu, L Yi, YZ Liang, CP Zhang Journal of Chemometrics 29 (3), 154-164	6	2015
Dynamic metabolic profiling of urine from type 2 diabetic KK-Ay mice treated with repaglinide by GC-MS H Yi, L Yi, R He, Q Lv, X Ren, Z Zhang, Y Liang, J He Analytical letters 45 (13), 1862-1874	6	2012
Enhancing coverage in LC-MS-based untargeted metabolomics by a new sample preparation procedure using mixed-mode solid-phase extraction and two derivatizations Q Wu, Y Xu, H Ji, Y Wang, Z Zhang, H Lu Analytical and bioanalytical chemistry 411 (23), 6189-6202	5	2019
Fast pure ion chromatograms extraction method for LC-MS R Wang, H Ji, P Ma, H Zeng, Y Xu, ZM Zhang, HM Lu Chemometrics and Intelligent Laboratory Systems 170, 68-74	5	2017

TITLE	CITED BY	YEAR
Rapid determination of unsaturated fatty acids in vegetable oil by Raman spectroscopy and chemometrics J Bin, F Ai, W Fan, J Zhou, Z Zhang Analytical Letters 49 (6), 831-842	5	2016
Chemical Fingerprint Analysis for Quality Control of <i>Herba Ephedrae</i> Based on HPLC-DAD Combined with Chemometrics Methods X Ren, Y Liang, X Li, H Yi, Z Zhang Analytical letters 45 (13), 1824-1835	5	2012
Sample classification of GC-ToF-MS metabolomics data without the requirement for chromatographic deconvolution H Lu, D Gan, Z Zhang, Y Liang Metabolomics 7 (2), 191-205	5	2011
Scalable calibration transfer without standards via dynamic time warping for near-infrared spectroscopy C Zou, H Zhu, J Shen, Y He, J Su, X Fan, H Lu, Z Zhang, Y Chen Analytical Methods 11 (35), 4481-4493	4	2019
Robust alignment of chromatograms by statistically analyzing the shifts matrix generated by moving window fast Fourier transform cross-correlation M Zhang, M Wen, ZM Zhang, H Lu, Y Liang, D Zhan Journal of separation science 38 (6), 965-974	4	2015
TarMet: a reactive GUI tool for efficient and confident quantification of MS based targeted metabolic and stable isotope tracer analysis H Ji, Z Zhang, H Lu Metabolomics 14 (5), 1-5	3	2018
Prediction of liquid chromatographic retention time with graph neural networks to assist in small molecule identification Q Yang, H Ji, H Lu, Z Zhang Analytical Chemistry 93 (4), 2200-2206	2	2021
Deep learning enable untargeted metabolite extraction from high throughput coverage data-independent acquisition H Ji, H Lu, Z Zhang bioRxiv	2	2020
Chemometrics in instrumental analysis of complex systems—in honor and memory of Yi-Zeng Liang Z Zhang, H Li, Y Yun, P Ma, L Yi, D Ren, L Zhang, J Yan, N Dong, B Deng, ... Journal of Chemometrics 32 (11), e3095	2	2018
Parallel formula generator based on branch-and-bound algorithm for elucidating high resolution mass spectra M Zhang, Z Zhang, C Chen, H Lu, Y Liang Chemometrics and Intelligent Laboratory Systems 153, 106-109	2	2016
基于 Arduino 和 Python 搭建的实时在线 pH 测量平台 宾俊, 艾芳芳, 刘念, 张志敏, 梁逸曾 计算机与应用化学 1	2	2013

TITLE	CITED BY	YEAR
Investigation of chemical components variation in maxing shigan decoction by HPLC-DAD M He, Y Liang, Z Zhang, Y Li, Z Zeng, D Cao, Y Yun, J Yan Journal of liquid chromatography & related technologies 35 (19), 2777-2794	2	2012
A novel storage method for near infrared spectroscopy chemometric models ZM Zhang, S Chen, YZ Liang Analytica Chimica Acta 668 (2), 149	2	2010
Mixture analysis using non-negative elastic net for Raman spectroscopy HT Zeng, MH Hou, YP Ni, Z Fang, XQ Fan, HM Lu, ZM Zhang Journal of Chemometrics 34 (10), e3293	1	2020
Development of a sensitive and rapid UHPLC–MS/MS method for simultaneous quantification of nine compounds in rat plasma and application in a comparative pharmacokinetic study ... C Fu, Q Wu, Z Zhang, Z Xia, Z Liu, H Lu, Y Wang, G Huang Biomedical Chromatography 34 (9), e4872	1	2020
Separation of Glycolipids/Sphingolipids from Glycerophospholipids on TiO₂ Coating in Aprotic Solvent for Rapid Comprehensive Lipidomic Analysis with Liquid ... Z Huang, Q Wu, H Lu, Y Wang, Z Zhang Analytical Chemistry 92 (16), 11250-11259	1	2020
Two-Way Data Analysis: Multivariate Curve Resolution: Noniterative Resolution Methods Z Zhang, P Ma, H Lu Elsevier	1	2020
MARS 2: A computational tool to resolve and extract features from large-scale GC-MS datasets P Ma, M Li, H Lu, Z Zhang Chemometrics and Intelligent Laboratory Systems 191, 12-20	1	2019
Eliminating Non-linear Raman Shift Displacement Between Spectrometers via Moving Window Fast Fourier Transform Cross-Correlation H Chen, Y Liu, F Lu, Y Cao, ZM Zhang Frontiers in chemistry 6, 515	1	2018
Structure-aware enhancement of imaging mass spectrometry data for semantic segmentation L Liang, Z Zhang Chemometrics and Intelligent Laboratory Systems 171, 259-265	1	2017
基于小波-反向搜索及表面增强拉曼的食品中色素的光谱定性分析 彭颖, 张志敏, 卢红梅, 梁逸曾, 刘察, 陈启振, 刘国坤 分析测试学报 36 (5), 627-632	1	2017
A GC-MS study of the stability of rat serum metabolome during the sample preparation procedure P Cai, J Huang, Z Zhang, H Lu Analytical Methods 5 (23), 6807-6813	1	2013

TITLE	CITED BY	YEAR
Peak alignment for herbal fingerprints from liquid chromatography-high resolution mass spectrometry via diffusion model and bi-directional eigenvalues J Zeng, M He, H Wu, S Fu, Z Zhang Microchemical Journal 167, 106296		2021
Developing a Peak Extraction and Retention (PEER) Algorithm for Improving the Temporal Resolution of Raman Spectroscopy S Luo, X Wang, G Chen, Y Xie, W Zhang, Z Zhou, Z Zhang, B Ren, G Liu, ... Analytical Chemistry		2021
IsoResolve: predicting splice isoform functions by integrating gene and isoform-level features with domain adaptation HD Li, C Yang, Z Zhang, M Yang, FX Wu, GS Omenn, J Wang Bioinformatics 37 (4), 522-530		2021
Deep-Learning-Assisted multivariate curve resolution X Fan, P Ma, M Hou, Y Ni, Z Fang, H Lu, Z Zhang Journal of Chromatography A 1635, 461713		2021
Pure Ion Chromatograms Combined with Advanced Machine Learning Methods Improve Accuracy of Discriminant Models in LC–MS-Based Untargeted Metabolomics M Tian, Z Lin, X Wang, J Yang, W Zhao, H Lu, Z Zhang, Y Chen Molecules 26 (9), 2715		2021
Chromatographic Profiling with Machine Learning Discriminates the Maturity Grades of <i>Nicotiana tabacum</i> L. Leaves Y Chen, M Tian, G Zhao, H Lu, Z Zhang, C Zou Separations 8 (1), 9		2021
Rapid and sensitive detection of neotame in instant grain beverages by paper-based silver nanoparticles substrates M Han, W Wei, H Lu, Z Zhang Micro & Nano Letters 15 (15), 1099-1104		2020
Rapid Identification of Active Ingredient and Geographic Traceability of Bifonazole Drugs by Raman Spectroscopy L Si-Heng, Z Zhi-Ming, H Jian-Ying, P Cheng, L Ling-Ling, Z Shu-Feng, ... CHINESE JOURNAL OF ANALYTICAL CHEMISTRY 48 (9), 1210-1218		2020
Detection of cimetidine in human plasma by surface-enhanced Raman scattering Y Zang, Z Zhang, H Lu Micro & Nano Letters 15 (8), 514-518		2020
基于气相色谱-质谱联用的血府逐瘀汤治疗大鼠颅脑损伤的血浆代谢组学研究 范帆, 张志敏, 卢红梅 分析测试学报 39 (8), 967-973		2020
Fast and Low-Cost Surface-Enhanced Raman Scattering (SERS) Method for On-Site Detection of Flumetsulam in Wheat M Han, H Lu, Z Zhang Molecules 25 (20), 4662		2020

TITLE	CITED BY	YEAR
Feature Extraction for LC–MS via Hierarchical Density Clustering H Zhu, Y Chen, C Liu, R Wang, G Zhao, B Hu, H Ji, ZM Zhang, H Lu Chromatographia 82 (10), 1449-1457		2019
利用混料设计和香农信息熵优化香烟主流烟气萃取溶液的配比 李忠, 黄静, 张志敏, 郑宜报, 郭生云, 梁逸曾 计算机与应用化学 5		2013
卷烟烟气 GC/oa—TOF—MS 分析的萃取溶剂选择与程序升温时间优化 李忠, 黄静, 梁逸曾, 梁逸曾, 张志敏, 张志敏, 郑宜报, 郑宜报, 郭生云 烟草科技 5		2013