

Tianlong Zhang

List of Publications by Year in descending order

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52
papers

1,606
citations

331670

21
h-index

315739

38
g-index

52
all docs

52
docs citations

52
times ranked

864
citing authors

| # | ARTICLE | IF | CITATIONS |
|----|---|------|-----------|
| 1 | Laser induced breakdown spectroscopy combined with hybrid variable selection for the prediction of the environmental risk Nemerow index of heavy metals in oily sludge. <i>Journal of Analytical Atomic Spectrometry</i> , 2022, 37, 1099-1108. | 3.0 | 11 |
| 2 | Evaluation of the potential ecological risk of metals in atmospherically deposited particulate matter via laser-induced breakdown spectroscopy combined with machine learning. <i>Chinese Journal of Analytical Chemistry</i> , 2022, , 100097. | 1.7 | 0 |
| 3 | A novel hybrid filter/wrapper method for feature selection in archaeological ceramics classification by laser-induced breakdown spectroscopy. <i>Analyst, The</i> , 2021, 146, 1023-1031. | 3.5 | 13 |
| 4 | Pollution risk estimation of the Cu element in atmospheric sedimentation samples by laser induced breakdown spectroscopy (LIBS) combined with random forest (RF). <i>Analytical Methods</i> , 2021, 13, 3424-3432. | 2.7 | 10 |
| 5 | Novel Method Based on Hollow Laser Trapping-LIBS-Machine Learning for Simultaneous Quantitative Analysis of Multiple Metal Elements in a Single Microsized Particle in Air. <i>Analytical Chemistry</i> , 2021, 93, 2281-2290. | 6.5 | 19 |
| 6 | Hybrid variable selection strategy coupled with random forest (RF) for quantitative analysis of methanol in methanol-gasoline via Raman spectroscopy. <i>Spectrochimica Acta - Part A: Molecular and Biomolecular Spectroscopy</i> , 2021, 251, 119430. | 3.9 | 16 |
| 7 | Quantitative analysis of coal quality by mutual information-particle swarm optimization (MI-PSO) hybrid variable selection method coupled with spectral fusion strategy of laser-induced breakdown spectroscopy (LIBS) and fourier transform infrared spectroscopy (FTIR). <i>Spectrochimica Acta, Part B: Atomic Spectroscopy</i> , 2021, 178, 106112. | 2.9 | 17 |
| 8 | The detonation heat prediction of nitrogen-containing compounds based on quantitative structure-activity relationship (QSAR) combined with random forest (RF). <i>Chemometrics and Intelligent Laboratory Systems</i> , 2021, 213, 104249. | 3.5 | 11 |
| 9 | Application of laser-induced breakdown spectroscopy (LIBS) in environmental monitoring. <i>Spectrochimica Acta, Part B: Atomic Spectroscopy</i> , 2021, 181, 106218. | 2.9 | 90 |
| 10 | Quantitative analysis of polycyclic aromatic hydrocarbons in soil by infrared spectroscopy combined with hybrid variable selection strategy and partial least squares. <i>Spectrochimica Acta - Part A: Molecular and Biomolecular Spectroscopy</i> , 2021, 257, 119771. | 3.9 | 20 |
| 11 | The spectral fusion of laser-induced breakdown spectroscopy (LIBS) and mid-infrared spectroscopy (MIR) coupled with random forest (RF) for the quantitative analysis of soil pH. <i>Journal of Analytical Atomic Spectrometry</i> , 2021, 36, 1084-1092. | 3.0 | 7 |
| 12 | Synchronous detection of heavy metal ions in aqueous solution by gold nanoparticle surface-enhanced laser-induced breakdown spectroscopy. <i>Journal of Analytical Atomic Spectrometry</i> , 2021, 36, 2639-2648. | 3.0 | 17 |
| 13 | Metal-chelate induced nanoparticle aggregation enhanced laser-induced breakdown spectroscopy for ultra-sensitive detection of trace metal ions in liquid samples. <i>Journal of Analytical Atomic Spectrometry</i> , 2020, 35, 188-197. | 3.0 | 14 |
| 14 | Rapid discrimination of <i>Salvia miltiorrhiza</i> according to their geographical regions by laser induced breakdown spectroscopy (LIBS) and particle swarm optimization-kernel extreme learning machine (PSO-KELM). <i>Chemometrics and Intelligent Laboratory Systems</i> , 2020, 197, 103930. | 3.5 | 23 |
| 15 | Four-metal-element quantitative analysis and pollution source discrimination in atmospheric sedimentation by laser-induced breakdown spectroscopy (LIBS) coupled with machine learning. <i>Journal of Analytical Atomic Spectrometry</i> , 2020, 35, 403-413. | 3.0 | 21 |
| 16 | A modified backward elimination approach for the rapid classification of Chinese ceramics using laser-induced breakdown spectroscopy and chemometrics. <i>Journal of Analytical Atomic Spectrometry</i> , 2020, 35, 518-525. | 3.0 | 12 |
| 17 | Applications of laser-induced breakdown spectroscopy (LIBS) combined with machine learning in geochemical and environmental resources exploration. <i>TrAC - Trends in Analytical Chemistry</i> , 2020, 133, 116113. | 11.4 | 66 |
| 18 | Data fusion of laser induced breakdown spectroscopy (LIBS) and infrared spectroscopy (IR) coupled with random forest (RF) for the classification and discrimination of compound <i>salvia miltiorrhiza</i> . <i>Chemometrics and Intelligent Laboratory Systems</i> , 2020, 207, 104179. | 3.5 | 25 |

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|----|---|-----|-----------|
| 19 | A novel strategy for quantitative analysis of soil pH via laser-induced breakdown spectroscopy coupled with random forest. <i>Plasma Science and Technology</i> , 2020, 22, 074003. | 1.5 | 9 |
| 20 | Machine Learning Allows Calibration Models to Predict Trace Element Concentration in Soils with Generalized LIBS Spectra. <i>Scientific Reports</i> , 2019, 9, 11363. | 3.3 | 68 |
| 21 | A novel hybrid feature selection strategy in quantitative analysis of laser-induced breakdown spectroscopy. <i>Analytica Chimica Acta</i> , 2019, 1080, 35-42. | 5.4 | 65 |
| 22 | Simultaneous quantitative analysis of four metal elements in oily sludge by laser induced breakdown spectroscopy coupled with wavelet transform-random forest (WT-RF). <i>Chemometrics and Intelligent Laboratory Systems</i> , 2019, 194, 103854. | 3.5 | 9 |
| 23 | Rapid quantitative analysis of the acidity of iron ore by the laser-induced breakdown spectroscopy (LIBS) technique coupled with variable importance measures-random forests (VIM-RF). <i>Analytical Methods</i> , 2019, 11, 3419-3428. | 2.7 | 22 |
| 24 | Quantitative structure-activity relationship (QSAR) study of carcinogenicity of polycyclic aromatic hydrocarbons (PAHs) in atmospheric particulate matter by random forest (RF). <i>Analytical Methods</i> , 2019, 11, 1816-1821. | 2.7 | 16 |
| 25 | A hybrid variable selection method based on wavelet transform and mean impact value for calorific value determination of coal using laser-induced breakdown spectroscopy and kernel extreme learning machine. <i>Spectrochimica Acta, Part B: Atomic Spectroscopy</i> , 2019, 154, 75-81. | 2.9 | 44 |
| 26 | Data Fusion of Raman and Near-Infrared Spectroscopies for the Rapid Quantitative Analysis of Methanol Content in Methanol-Gasoline. <i>Energy & Fuels</i> , 2019, 33, 12286-12294. | 5.1 | 19 |
| 27 | Laser-induced breakdown spectroscopy in archeological science: a review of its application and future perspectives. <i>Applied Spectroscopy Reviews</i> , 2019, 54, 573-601. | 6.7 | 41 |
| 28 | Chemometrics in laser-induced breakdown spectroscopy. <i>Journal of Chemometrics</i> , 2018, 32, e2983. | 1.3 | 79 |
| 29 | Determination of coal properties using laser-induced breakdown spectroscopy combined with kernel extreme learning machine and variable selection. <i>Journal of Analytical Atomic Spectrometry</i> , 2018, 33, 2089-2097. | 3.0 | 33 |
| 30 | <i>In situ</i> attenuated total reflection-Fourier transform infrared (ATR-FTIR) spectroscopy combined with non-negative matrix factorization for investigating the synthesis reaction mechanism of 3-amino-4-amino-oxime furazan. <i>Analytical Methods</i> , 2018, 10, 5817-5822. | 2.7 | 12 |
| 31 | Rapid classification of archaeological ceramics via laser-induced breakdown spectroscopy coupled with random forest. <i>Spectrochimica Acta, Part B: Atomic Spectroscopy</i> , 2018, 149, 288-293. | 2.9 | 53 |
| 32 | Determination of carbon and sulfur content in coal by laser induced breakdown spectroscopy combined with kernel-based extreme learning machine. <i>Chemometrics and Intelligent Laboratory Systems</i> , 2017, 167, 226-231. | 3.5 | 48 |
| 33 | Quantitative detection of harmful elements in alloy steel by LIBS technique and sequential backward selection-random forest (SBS-RF). <i>Journal of Analytical Atomic Spectrometry</i> , 2017, 32, 2194-2199. | 3.0 | 38 |
| 34 | Classification and discrimination of coal ash by laser-induced breakdown spectroscopy (LIBS) coupled with advanced chemometric methods. <i>Journal of Analytical Atomic Spectrometry</i> , 2017, 32, 1960-1965. | 3.0 | 46 |
| 35 | Classification of wines according to their production regions with the contained trace elements using laser-induced breakdown spectroscopy. <i>Spectrochimica Acta, Part B: Atomic Spectroscopy</i> , 2017, 135, 91-101. | 2.9 | 52 |
| 36 | Classification of steel samples by laser-induced breakdown spectroscopy and random forest. <i>Chemometrics and Intelligent Laboratory Systems</i> , 2016, 157, 196-201. | 3.5 | 45 |

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|----|---|-----|-----------|
| 37 | Classification of iron ore based on acidity and alkalinity by laser induced breakdown spectroscopy coupled with N-nearest neighbours (N3). <i>Analytical Methods</i> , 2016, 8, 6216-6221. | 2.7 | 17 |
| 38 | Acidity analysis of iron ore based on calibration-free laser-induced breakdown spectroscopy (CF-LIBS) combined with a binary search algorithm (BSA). <i>RSC Advances</i> , 2016, 6, 76813-76823. | 3.6 | 17 |
| 39 | Quantitative analysis of the major components of coal ash using laser induced breakdown spectroscopy coupled with a wavelet neural network (WNN). <i>Analytical Methods</i> , 2016, 8, 1674-1680. | 2.7 | 17 |
| 40 | A method for improving the accuracy of calibration-free laser-induced breakdown spectroscopy (CF-LIBS) using determined plasma temperature by genetic algorithm (GA). <i>Journal of Analytical Atomic Spectrometry</i> , 2015, 30, 1336-1344. | 3.0 | 40 |
| 41 | Quantitative determination of Cr in ink by laser-induced breakdown spectroscopy(LIBS) using ZnO as adsorbent. <i>Chemical Research in Chinese Universities</i> , 2015, 31, 909-913. | 2.6 | 8 |
| 42 | Quantitative analysis of Fe content in iron ore via external calibration in conjunction with internal standardization method coupled with LIBS. <i>Chemical Research in Chinese Universities</i> , 2015, 31, 107-111. | 2.6 | 16 |
| 43 | Quantitative analysis of nonmetal elements in steel using laser-induced breakdown spectroscopy combined with random forest. <i>Analytical Methods</i> , 2015, 7, 2425-2432. | 2.7 | 20 |
| 44 | Investigating the synthetic mechanism of 3,5-diamino-1,2,4-triazole by using fibre optic ATR-IR spectroscopy combined with kernel independent component analysis. <i>Analytical Methods</i> , 2015, 7, 4152-4158. | 2.7 | 8 |
| 45 | Classification of different types of slag samples by laser-induced breakdown spectroscopy (LIBS) coupled with random forest based on variable importance (VIRF). <i>Analytical Methods</i> , 2015, 7, 9171-9176. | 2.7 | 28 |
| 46 | Quantitative and classification analysis of slag samples by laser induced breakdown spectroscopy (LIBS) coupled with support vector machine (SVM) and partial least square (PLS) methods. <i>Journal of Analytical Atomic Spectrometry</i> , 2015, 30, 368-374. | 3.0 | 99 |
| 47 | A single-beam-splitting technique combined with a calibration-free method for field-deployable applications using laser-induced breakdown spectroscopy. <i>RSC Advances</i> , 2015, 5, 4537-4546. | 3.6 | 14 |
| 48 | Classification of iron ores by laser-induced breakdown spectroscopy (LIBS) combined with random forest (RF). <i>Journal of Analytical Atomic Spectrometry</i> , 2015, 30, 453-458. | 3.0 | 81 |
| 49 | Classification of steel materials by laser-induced breakdown spectroscopy coupled with support vector machines. <i>Applied Optics</i> , 2014, 53, 544. | 1.8 | 55 |
| 50 | A method of improving classification precision based on model population analysis of steel material for laser-induced breakdown spectroscopy. <i>Analytical Methods</i> , 2014, 6, 8374-8379. | 2.7 | 8 |
| 51 | A novel approach for the quantitative analysis of multiple elements in steel based on laser-induced breakdown spectroscopy (LIBS) and random forest regression (RFR). <i>Journal of Analytical Atomic Spectrometry</i> , 2014, 29, 2323-2329. | 3.0 | 87 |
| 52 | Quantitative Analysis of Methanol in Methanol Gasoline by Calibration Transfer Strategy Based on Kernel Domain Adaptive Partial Least Squares(kda-PLS). <i>Chemical Research in Chinese Universities</i> , 0, , 1. | 2.6 | 0 |