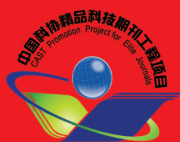


1981 年创刊 物理类、化学类核心期刊

ISSN 1000-0593
CODEN GYGFED

2018 4 月刊



光谱學與光谱分析

GUANGPUXUE YU GUANGPU FENXI

嚴濟慈題

第 38 卷 第 4 期
Vol.38 No.4

SPECTROSCOPY AND SPECTRAL ANALYSIS

主管：中国科学技术协会

主 办：中国光学学会

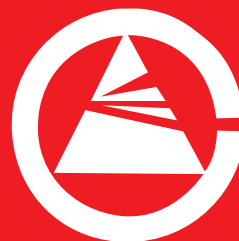
承 办：钢铁研究总院

中国科学院物理研究所

北京大学

清华大学

ISSN 1000-0593



目次

星载铝漫反射板光谱特性测量研究	常 振 赵敏杰 王 煜 司福祺 周海金 刘文清(997)
CO 分子振转光谱的理论研究	张学富 吕 兵 宋晓书 令狐荣锋(1001)
射频容性耦合等离子体放电特性的光谱诊断	刘 冲 何 湘 张亚春 陈建平 陈玉东 曾小军 陈秉岩 朱卫华(1007)
IPDA 激光雷达数据反演快速精确优化算法	马 晖 刘 东 李文峰 廖 鹤 谢晨波 王珍珠 王邦新 黄 见 王英俭(1014)
航空偏振遥感数据反演陆地上空气溶胶光学厚度	王 涵 杨磊库 都伟冰 刘 培 孙晓兵(1019)
多波段激光雷达颗粒物质量浓度探测方法	饶志敏 何廷尧 华灯鑫 陈若曦(1025)
基于光腔衰落光谱技术的压力计校准方法	周 胜 韩艳玲 李斌成(1031)
名义上无水硬玉矿物中“水”的热变异行为研究	邢莹莹(1036)
基于太赫兹时域光谱技术的重金属离子吸附检测方法研究	燕 芳 邹粮徽 王志春(1044)
太赫兹时域光谱技术的变压器油低水含量检测	蒋 强 王 玥 文 哲 王际华(1049)
一种基于简化正交距离的近红外异常光谱判断方法	孟丹蕊 傅 博 徐可欣 刘 蓉(1053)
湖北与安徽产高品质绿松石的红外与拉曼光谱特征及意义	陈文君 施光海 王 妍 任 佳 袁 野 戴 慧(1059)
不同含水率下木材尺寸变化的近红外光谱研究	王立双 张文博 全 莉(1066)
近红外光谱预测稻谷水分含量特征谱区选择及其效率分析	黄 华 吴习宇 祝诗平(1070)
Vis-NIR 光谱快速估测土壤可侵蚀因子可行性分析	喻 武 贾晓琳 陈颂超 周炼清 史 舟(1076)
基于正交信号回归法对中试在线近红外定量模型的模型传递研究	王安冬 吴志生 贾一飞 张盈盈 詹雪艳 马长华(1082)
基于近红外光谱油分检测的玉米单倍体鉴别方法研究	李浩光 于云华 逢 燕 沈学锋(1089)
应用近红外光谱技术实现转双价基因(Cry1Ab/Cry2Aj-G10evo)玉米的快速识别	彭 城 冯旭萍 何 勇 张 初 赵懿滢 徐俊锋(1095)
红外光谱结合化学计量学快速鉴别云南重楼不同炮制品	吴 喆 张 霁 左智天 徐福荣 王元忠 张金渝(1101)
拉曼光谱研究苯-重水间氢同位素分馏效应	王世霞 赵昊辰 吴 嘉 郑海飞(1107)
质谱和拉曼光谱对 $[M(H_2O)_n]^+$ ($M=Li, K$)水合团簇的研究	吴晓静 刘阿钻 余学会 程龙玖(1112)
入射激光功率对硅纳米线拉曼光谱及荧光光谱的影响	张秋慧 郭壮志 冯国英(1118)
TLC-SERS 法快速检测改善睡眠类保健食品中四种化学成分	李静辉 程闹闹 刘吉成 李 莉 贾首时(1122)
激光拉曼光谱检测灵芝孢子油	郭鹏程 薛靖虹 陈相柏(1129)
基于密度泛函的甲醇和乙醇荧光特性研究	朱从海 陈国庆 朱 纯 赵金辰 刘怀博 张笑河 宋鑫澍(1133)
生物滞留系统间隙水 DOM 三维荧光光谱特征分析	范功端 林修咏 王书敏 罗 劲 谢志刚 李 强(1139)
水源热泵水处理系统 DOM 三维荧光光谱特征分析	欧阳恒 肖剑仁 林修咏 范功端(1146)
激发-发射荧光矩阵光谱结合多维辨别分析用于葡萄干分类研究	胡乐乾 马 帅 尹春玲 刘志敏(1153)
超分子荧光探针用于环境水样中百草枯的测定	唐 青 张 静 宋桂先 席芸芸 黄 英 陶 朱 周清娣 卫 钢(1160)
三维同步荧光光谱法快速辨别葵花籽油品质	李双芳 郭玉宝 孙艳辉 顾海洋(1165)
基于三维荧光光谱结合小波压缩与 APTLD 对水中多环芳烃测定	王玉田 刘婷婷 刘凌妃 杨 哲 崔耀耀(1171)
室内高压电弧/电晕的紫外特性分析和测量研究	房陈岩 李清灵 庾金涛 尹达一(1178)
基于叶片反射光谱特征的银杏健康量化评价技术	金桂香 刘海轩 刘 瑜 吴 鞠 徐程扬(1184)
浑浊二类水体的高分四号卫星大气校正效果分析	宋 挺 龚绍琦 刘军志 顾征帆 石浚哲 吴 蔚(1191)
Si, Ag, F 离子共修饰 HA 纳米生物薄膜的制备与表征	叶 婷 乔海霞 黄 勇 郭家池 马梦楚 茹 苹 陈方方 袁翠芳 刘 欢 苏卓彬 张雪姣 高 远(1198)
巯基化、钠化和酸化膨润土对 Cu^{2+} , Pb^{2+} 和 Zn^{2+} 的吸附性能研究	庞婷雯 杨志军 黄逸聪 雷雪英 曾 璇 李晓潇(1203)
连续辐射谱法计算闪电通道电子温度	董向成 袁 萍(1209)
喷墨打印系统多光谱特征化正向模型的建立	梁 静 黄 浩 廉玉生 宁思宇 孙 亮(1213)
石墨烯改性锡酸锌材料的光谱特性及其光催化性能	薛娟琴 代继哲 王真星 李 迪(1219)
$[1ClCl:2EG]_3[CrCl_3]_3 \cdot 6H_2O$ 离子液体中 $Cr(III)$ 配合物的研究	张贤杰 李林菲 李 艳 李 坚 华一新 徐存英 张启波(1225)

新疆哈密绿松石的矿物学和光谱学特征研究	刘喜锋 林晨露 李丹丹 朱琳 宋双 刘琰 沈崇辉(1231)
内蒙古锦鸡儿属植物叶片矿质元素的电感耦合等离子体质谱分析	惠岑悻 冯金朝 石莎(1240)
ICP-MS 研究太湖过滤水和表层沉积物中重金属的含量水平及污染评价	方芳 季雨珊 李想 柏娜 刘颖(1245)
最小二乘支持向量机和内标法的乐果农药含量 LIBS 检测	孙通 刘津 甘兰萍 吴宜青 刘木华(1251)
连续推扫计算光谱成像技术	相里斌 吕群波 刘扬阳 孙建颖 王建威 姚涛 裴琳琳 李伟艳(1256)
EAST 快速极紫外光谱仪绝对强度的原位标定	杨秀达 张凌 许棕 张鹏飞 陈颖杰 黄娟 吴振伟 龚先祖 胡立群(1262)
傅里叶光谱仪高精度光谱定标研究	邹曜璞 张磊 韩昌佩 李利兵(1268)
Computational Studies on the Ground State Tautomer, Hydrogen Conformations and Vibrational Spectroscopic Analysis of Antitumor Agents: 3-Deazauracil and 6-Azauracil	Çağrı Çtrak Nurettin Körözlü Yusuf Sert Fatih Uzun(1276)
A Solid Phase Extraction Application of Hybrid Nano B ₂ O ₃ /ZrO ₂ for Separation and Determination of Trace Indium in Environmental Samples	Ozcan Yalcinkaya Harun Ciftci Cigdem Er Caliskan Ozge Kalender Ali Rehber Turker(1283)
Luminescence Properties of Carbazole-Substituted Alq ₃ Derivative: a Potential Multifunctional Fluorescent Sensing Material	ZHANG Chun-yan LUO Jian-xin OU Li-juan LIU Yong HU Bo-nian YU Gui-peng PAN Chun-yue(1290)
Fourier Transform Infrared Spectroscopy Analysis of Humic Acids from Brown and Cinnamon Soils under Robinia pseudoacacia Forest	ZHANG Guang-na LIN Xiang-jie LI Yun-mei XU Shu-jian ZHANG Yu-lan(1298)
Rice Germination Rate Detection Based on Fluorescent Spectrometry and Deep Belief Network	LU Wei GUO Yang-ming DAI De-jian ZHANG Cheng-yu WANG Xin-yu(1303)
A Comparative Study on the Pyrolysis Characteristics of Direct-Coal-Liquefaction Residue Through Microwave and Conventional Methods	SONG Yong-hui MA Qiao-na HE Wen-jin TIAN Yu-hong LAN Xin-zhe(1313)
Detecting H ₂ S Gas Concentration by 1,8-Naphthalimides Fluorescent Probe	TANG Dong-lin WANG Qiao CHU Yi-neng LI Rui-hai(1319)
Preparation of the Porous CeO ₂ Film and Its Spectral Properties	LIU Xiao-zhen SHI Xing-ju LIU Xiao-zhou REN Xiao-hui CHEN Jie ZHOU Jie-hua(1324)
《光谱学与光谱分析》对来稿英文摘要的要求	(1052)
第二十届全国分子光谱学学术会议暨 2018 年光谱年会(第一轮通知)	(1075)
《光谱学与光谱分析》2018 年征订启事	(1117)
《光谱学与光谱分析》期刊社决定采用 ScholarOne Manuscripts 在线投稿审稿系统	(1132)
《光谱学与光谱分析》投稿简则	(1190)
关于《光谱学与光谱分析》收取审稿费的通知	(1218)
更正	(1224)
敬告读者——《光谱学与光谱分析》已全文上网	(1267)

本刊系中国物理类、化学类
核心期刊；中国科协精品科技
期刊；已被国内外 CSD, SCI,
Ei, CA, AA, PKJ, MEDLINE,
Scopus 等文献机构收录；
中国科技论文统计源期刊；
中国学术期刊文摘统计源期刊

网址：<http://www.gpxygpx.com>
本刊 e-mail：chnpgpxygpx@vip.sina.com
修改稿专用邮箱：gp2008@vip.sina.com

Contents

Study on the Spectral Features of Space-Borne Aluminum Diffuser	CHANG Zhen, et al (997)
Theoretical Study of Ro-Vibrational Spectrum of CO Molecule	ZHANG Xue-fu, et al (1001)
Spectroscopic Diagnostics on Discharge Characteristics of RF Capacitive Coupled Plasma	LIU Chong, et al (1007)
A Rapid and Accurate Optimizing Algorithm for IPDA Lidar Data Inversion	MA Hui, et al (1014)
Inversion of Aerosol Optical Depth over Land Surface from Airborne Polarimetric Measurements	WANG Han, et al (1019)
Remote Sensing of Particle Mass Concentration Using Multi-Wavelength Lidar	RAO Zhi-min, et al (1025)
Calibration Method of Pressure Gauges Based on Cavity Ring-Down Spectroscopy Technique	ZHOU Sheng, et al (1031)
The Thermal Variation Behavior of “Water” in Nominally Anhydrous Jadeite Mineral	XING Ying-ying (1036)
Detection of Adsorption for Heavy Metals Ions Based on Terahertz Time Domain Spectroscopy	YAN Fang, et al (1044)
Moisture Content Determination of Transformer Oil by Using Terahertz Time-Domain Spectroscopy	JIANQ Qiang, et al (1049)
An Outlier Determination Method for Near-Infrared Spectroscopy Based on the Simplified Orthogonal Distance	MENG Dan-rui, et al (1053)
Infrared and Raman Spectra of High-Quality Turquoises from Hubei and Anhui, China; Characteristics and Significance	CHEN Wen-jun, et al (1059)
Studies on Dimensional Stability of Wood under Different Moisture Conditions by Near Infrared Spectroscopy Technology	WANG Li-shuang, et al (1066)
Feature Wavelength Selection and Efficiency Analysis for Paddy Moisture Content Prediction by Near Infrared Spectroscopy	HUANG Hua, et al (1070)
Feasibility Analysis of Rapid Estimation of Soil Erosion Factor Using Vis-NIR Spectroscopy	YU Wu, et al (1076)
Model Transfer of On-Line Pilot-Scale Near Infrared Quantitative Model Based on Orthogonal Signal Regression	WANG An-dong, et al (1082)
Study of Maize Haploid Identification Based on Oil Content Detection with Near Infrared Spectroscopy	LI Hao-guang, et al (1089)
Discrimination of Transgenic Maize Containing the Cry1Ab/Cry2Aj and G10evo Genes Using Near Infrared Spectroscopy (NIR)	PENG Cheng, et al (1095)
Rapid Discrimination of the Different Processed <i>Paris polyphylla</i> var. <i>yunnanensis</i> with Infrared Spectroscopy Combined with Chemometrics	WU Zhe, et al (1101)
Experimental Investigations on the Hydrogen Isotope Fractionation between Benzene and Heavy Water with <i>in-situ</i> Raman Spectrograph	WANG Shi-xia, et al (1107)
Study on $[M(H_2O)_n]^+$ ($M=Li, K$) Hydrated Clusters by Mass and Raman Spectra	WU Xiao-jing, et al (1112)
The Effect of Incident Laser Power on Raman Spectra and Photoluminescence Spectra of Silicon Nanowires	ZHANG Qiu-hui, et al (1118)
Rapid on-site TLC-SERS Detection of Four Sleep Problems Drugs Used as Adulterants in Health-Care Food	LI Jing-hui, et al (1122)
Raman Spectroscopy Study of Ganoderma Spore Oil	GUO Peng-cheng, et al (1129)
Studies of the Fluorescence Properties of Methanol and Ethanol Based on the Density Functional Theory	ZHU Cong-hai, et al (1133)
Compositional Characteristics of Interstitial Water Dissolved Organic Matter in Bioretention Systems with Different Filling	FAN Gong-duan, et al (1139)
Compositional Characteristics of Dissolved Organic Matter in Water Treatment Systems of Water Source Heat Pump Based on Three-Dimensional Fluorescence Analysis	OUYANG Heng, et al (1146)

Modeling Excitation-Emission Fluorescence Matrices with Multidimensional Pattern Recognition Algorithms for Classification of Raisin	<i>HU Le-qian, et al</i> (1153)
A Fluorescent Probe Based Host-Guest Complexation Between Cucurbit [7]uril and Neutral Red for the Detection of Paraquat Herbicide in Water Sample	<i>TANG Qing, et al</i> (1160)
Rapid Identification of Sunflower Seed Oil Quality by Three-Dimensional Synchronous Fluorescence Spectrometry	<i>LI Shuang-fang, et al</i> (1165)
Determination of Polycyclic Aromatic Hydrocarbons in Water Based on Three Dimensional Fluorescence Spectroscopy Combined with Wavelet Compression and APTLD	<i>WANG Yu-tian, et al</i> (1171)
The Measurement Study and Analysis of Ultraviolet Features of High Voltage Arc and Coronaindoors	<i>FANG Chen-yan, et al</i> (1178)
Study on Quantitative Assessment of <i>Ginkgo biloba</i> Tree Health Based on Characteristics of Leaf Spectral Reflectance	<i>JIN Gui-xiang, et al</i> (1184)
Performance Assessment of Atmospheric Correction for Multispectral Data of GF-4 on Inland Case II Turbid Water	<i>SONG Ting, et al</i> (1191)
Preparation and Characterization of Silicon, Silver, Fluorine Co-Modified Hydroxyapatite Nano-Biofilms	<i>YE Ting, et al</i> (1198)
Adsorption Properties of Thiol-Modified, Sodium-Modified and Acidified Bentonite for Cu^{2+} , Pb^{2+} and Zn^{2+}	<i>PANG Ting-wen, et al</i> (1203)
Calculating the Electron Temperature of Lightning Channel Based on the Continuous Radiation	<i>DONG Xiang-cheng, et al</i> (1209)
Study of the Multi-Spectral Characterization Model for Inkjet Printing System and Its Application	<i>LIANG Jing, et al</i> (1213)
Spectral Characteristic of Graphene Modified Zinc Stannate Materials and It's Photocatalytic Properties	<i>XUE Juan-qin, et al</i> (1219)
The Coordination Complexes of $\text{Cr}(\text{III})$ in $[\text{1ChCl} : 2\text{EG}]/\text{CrCl}_3 \cdot 6\text{H}_2\text{O}$ ILs	<i>ZHANG Xian-jie, et al</i> (1225)
Study on Mineralogy and Spectroscopy of Turquoises from Hami, Xinjiang	<i>LIU Xi-feng, et al</i> (1231)
Study on the Determination of Mineral Elements in Three <i>Caragana</i> Fabr. Species in Inner Mongolia by Inductively Coupled Plasma Mass Spectrometry	<i>HUI Cen-yi, et al</i> (1240)
Assessment of Pollution and Heavy Metals in Filtered Water and Surface Sediments of Taihu Lake by Using ICP-MS	<i>FANG Fang, et al</i> (1245)
Detection of Dimethoate Content with Laser Induced Breakdown Spectroscopy Combined with LSSVM and Internal Standard Method	<i>SUN Tong, et al</i> (1251)
Continuous Pushbroom Computational Imaging Spectrometry	<i>XIANGLI Bin, et al</i> (1256)
In-situ Absolute Intensity Calibration of Fast-Response Extreme Ultraviolet Spectrometer on Experimental Advanced Superconducting Tokamak	<i>YANG Xiu-da, et al</i> (1262)
Study of High Accuracy Spectral Calibration of Fourier Transform Spectrometer	<i>ZOU Yao-pu, et al</i> (1268)
Computational Studies on the Ground State Tautomer, Hydrogen Conformations and Vibrational Spectroscopic Analysis of Antitumor Agents: 3-Deazauracil and 6-Azaauracil	<i>Çağrı Çırak, et al</i> (1276)
A Solid Phase Extraction Application of Hybrid Nano $\text{B}_2\text{O}_3/\text{ZrO}_2$ for Separation and Determination of Trace Indium in Environmental Samples	<i>Ozcan Yalcinkaya, et al</i> (1283)
Luminescence Properties of Carbazole-Substituted Alq ₃ Derivative: a Potential Multifunctional Fluorescent Sensing Material	<i>ZHANG Chun-yan, et al</i> (1290)
Fourier Transform Infrared Spectroscopy Analysis of Humic Acids from Brown and Cinnamon Soils under <i>Robinia pseudoacacia</i> Forest	<i>ZHANG Guang-na, et al</i> (1298)
Rice Germination Rate Detection Based on Fluorescent Spectrometry and Deep Belief Network	<i>LU Wei, et al</i> (1303)
A Comparative Study on the Pyrolysis Characteristics of Direct-Coal-Liquefaction Residue Through Microwave and Conventional Methods	<i>SONG Yong-hui, et al</i> (1313)
Detecting H_2S Gas Concentration by 1,8-Naphthalimides Fluorescent Probe	<i>TANG Dong-lin, et al</i> (1319)
Preparation of the Porous CeO_2 Film and Its Spectral Properties	<i>LIU Xiao-zhen, et al</i> (1324)