首都师范大学学报(自然科学版)

Shoudu Shifan Daxue Xuebao(Ziran Kexue Ban)

2025年2月　　第46卷　第1期

目　　次

数学研究

基于三维几何变换和多目标规划的太阳影子定位分析 ……祁苗苗,张　霞,刘　明(1)

马尔科夫机制转换下考虑多因素的养老金问题 ……黄梦雷(8)

高阶可微函数Ostrowski型不等式的加强 ……时统业(20)

凝聚态物理研究

三碲化铬纳米颗粒中的法诺共振现象 ……郭　进,王　海,刘　颖(26)

双量子点-拓扑超导体混合系统中的散粒噪声及其谱分解 ……陈开伟,刘振乡,郭　航,郭健宏(32)

自由基化学研究

Katritzky盐作为氮自由基前体参与的化学反应研究进展 ……胡少俊,朱光礼,陈铁根(40)

食品与环境化学研究

2012—2022年广西食品中^{90}Sr放射性水平分析 ……

…… 卢秀芳,谢　萍,吴应宇,雷家杰,马一龙,冯兰英,赵新春(55)

气化石油焦灰渣中重金属钒、镍浸出研究 ……王静云,褚琳琳,张　然,金晓霞(61)

旅游研究

高铁开通背景下长江中游城市群旅游经济空间关联网络演变 ……马丽君,唐　盈(66)

旅游开发背景下渔村居民文化适应对文化传承行为的影响研究 ……王　娟,周　鑫(77)

高质量教育体系研究

世界地理课程思政育人核心元素与教学模式构建 ……李双双,户清丽,延军平(85)

城乡规划学来华留学生交通方向教学体系案例研究……朱高儒,徐兴蒙,张　纯,姚恩建(92)

Journal of Capital Normal University

(Natural Science Edition)

Vol.46 No.1 February 2025

Contents

Mathematics

Analysis of solar shadow location based on 3D geometric transformation and multi-objective programming ····· QI Miaomiao, ZHANG Xia, LIU Ming(1)

Multi factor pension problem under a Markov regime switching model ····· HUANG Menglei(8)

Strengthen of Ostrowski type inequality for higher order differentiable functions ····· SHI Tongye(20)

Condensed Matter Physics

Fano resonance phenomenon in chromic telluride nanoparticles ····· GUO Jin, WANG Hai, LIU Ying(26)

Shot noise and its spectral decomposition in hybrid system of double quantum dots-topological superconductor ····· CHEN Kaiwei, LIU Zhenxiang, GUO Hang, GUO Jianhong(32)

Radical Chemistry

Recent advances in the chemistry of Katritzky salts as nitrogen-centered radical precursors ····· HU Shaojun, ZHU Guangli, CHEN Tiegen(40)

Food and Enviromental Chemistry

^{90}Sr radioactivity in food in Guangxi from 2012 to 2022 ····· LU Xiufang, XIE Ping, WU Yingyu, Lei Jiajie, Ma Yilong, Feng Lanying, ZHAO Xinchun(55)

Leaching of heavy metals vanadium and nickel from gasified petroleum coke ash ····· WANG Jingyun, CHU Linlin, ZHANG Ran, JIN Xiaoxia(61)

Tourism

Evolution of spatial correlation network of tourism economy in the urban agglomerationsin in the Middle Reaches of Yangtze River under the background of the opening of high-speed railway ····· MA Lijun, TANG Ying(66)

Influence of cultural adaptation of fishing village residents on cultural inheritance in the context of tourism development ····· WANG Juan, ZHOU Xin(77)

Construction of High Quality Education System

Identification of ideological and political education elements and teaching model in the course of world geography ····· LI Shuangshuang, HU Qingli, YAN Junping(85)

Case study on the teaching system of transport field for international students major in urban and rural planning in China ····· ZHU Gaoru, XU Xingmeng, ZHANG Chun, YAO Enjian(92)