

# 淮北师范大学学报

(自然科学版)

2022年

第43卷第2期

总第153期

## 目 次

|   |                         |
|---|-------------------------|
| 分数阶双参数 Maxwell 流体自然对流与传热传质的 $L1$ /有限体积法 ..... | 赵金虎(1)                  |
| 面板数据均值变点的累积和比值估计 .....                        | 张婷婷,魏岳嵩,董三英(7)          |
| 基于谱配点法的过渡曲面构造 .....                           | 邹倩(13)                  |
| $\mu_p$ -bent 函数的进一步研究 .....                  | 汪莉婷,姜妞,卓泽朋(18)          |
| 格上高效的属性签名方案 .....                             | 陈启虹,江明丽,王艳(25)          |
| 随机丢包不确定的网络控制系统 $H_\infty$ 滤波 .....            | 马运强,王宗跃,甘泉(31)          |
| BNKT-BZN 无铅压电陶瓷的电学和储能性能 .....                 | 牛梦书,晁小练(38)             |
| 基于还原石墨烯和硫堇-金纳米粒子复合物的电化学 DNA 生物传感器的制备 .....    | 董笑,时安琪,耿明(44)           |
| 荆芥提取物的抗氧化活性及成分研究 .....                        | 张乐乐,高子强,汪菲菲,张盼盼,刘生杰(49) |
| 智能制造背景下具有随机产出风险的供应商激励研究 .....                 | 刘圆,石莉,韩玲玲,张乐乐(56)       |
| 经济内循环背景下体育消费升级的路径选择 .....                     | 郝宏钟(63)                 |
| 安徽成年女性大众体育市场细分调查 .....                        | 游贵兵,李媛,曹思洁(69)          |
| 基于偏相关分析的在校女大学生体质健康发展趋势研究 .....                | 李永刚,包文清(76)             |

## 教 学 研 究

|                                    |                        |
|------------------------------------|------------------------|
| 两届国家级数学教育教学成果奖的特征分析与启示 .....       | 李孝诚,张亚明,张森(81)         |
| 基于 Matlab 软件的 FIR 数字滤波辅助教学研究 ..... | 姜恩华,朱旋,陈东华(87)         |
| 电化学条件下苯醇到芳香醛的选择性氧化 .....           | 张金凤,蒋越,段荣琛,苏玉洁,孟令国(92) |
| 版权声明 .....                         | (96)                   |

期刊基本参数:CN 34-1316/N\*1979\*q\*A4\*96\*zh\*P\* ¥ 10.00\*1000\*16\*2022-06

本期执行编辑:宋运贤

**JOURNAL OF  
HUAIBEI NORMAL UNIVERSITY**  
(Natural Sciences)

Vol. 43 No. 2

Sum No. 153

2022

---

**CONTENTS**

|  |  |
|--|--|
| The $L1$ /finite volume method for natural convective heat and mass transfer of double fractional Maxwell viscoelastic fluid .....   | ZHAO Jinhu(1)  |
| Cumulative sum ratio estimator of mean change point in panel data .....  | ZHANG Tingting,WEI Yuesong,DONG Sanying(7)                       |
| Blending surface design based on spectral-collocation methods .....  | ZOU Qian(13)   |
| A further research on $\mu_p$ -bent functions .....  | WANG Liting,JIANG Niu,ZHUO Zepeng(18)                            |
| An efficient attribute-based signature scheme on lattice .....   | CHEN Qihong,JIANG Mingming,WANG Yan(25)                          |
| $H_\infty$ filtering for uncertain network control systems with random packet dropouts .....   | MA Yunqiang,WANG Zongyue,GAN Quan(31)                            |
| Energy-storage and electrical properties of lead-free BNKT-BZN piezoelectric ceramics .....  | NIU Mengshu,CHAO Xiaolian(38)                                    |
| Fabrication of electrochemical DNA biosensor based on reduced graphene and thionin-gold nanoparticle composite .....                 | DONG Xiao,SHI Anqi,GENG Ming(44)                                 |
| The research on antioxidant activity and chemical composition of extraction of <i>schizonepeta tenuifolia</i> Bip .....              | ZHANG Lele,GAO Ziqiang,WANG Feifei,ZHANG Panpan,LIU Shengjie(49) |
| Research on supplier incentive with random output risk under the background of intelligent manufacturing .....                       | LIU Yuan,SHI Li,HAN Lingling,ZHANG Lele(56)                      |
| The path choice of sports consumption upgrade under the background of economic internal cycle .....                                  | HAO Hongzhong(63)  |
| Research on market segmentation of adult female mass sports in Anhui province .....  | YOU Guibing,LI Yuan,CAO Sijie(69)                                |
| Research on the development trend of female college students' physical health based on partial correlation analysis .....            | LI Yonggang,BAO Wenqing(76)                                      |
| Characteristic analysis and enlightenment of mathematics education teaching achievement awards of the basic education in China ..... | LI Xiaocheng,ZHANG Yaming,ZHANG Sen(81)                          |
| Research on FIR digital filter-assisted teaching based on the Matlab software .....  | JIANG Enhua,ZHU Xuan,CHEN Donghua(87)                            |
| Chemoselective oxidation of benzyl alcohol to aromatic aldehyde under electrochemical conditions .....                               | ZHANG Jinfeng,JIANG Yue,DUAN Rongchen,SU Yujie,MENG Lingguo(92)  |