

Science Technology and Industry

# 科技和产业

科技和产业

第二十卷

第六期



二〇二〇年

中国技术经济学会主办

第20卷

2020. 6

《科技和产业》2001年创刊

主管:中国科学技术协会

主办:中国技术经济学会

编委会成员

主任:李平

副主任委员:李志军 张宗益

牛东晓 李开孟

吕廷杰

委员:(按姓氏笔画排序)

马庆国 王震 王兆华

乔忠 安景文 孙锐

邹嘉华 张强 张米尔

张兴平 张运洲 张喜荣

胡祥培 柳瑞禹 谭忠富

主编:李平

副主编:李志军 牛东晓

李开孟 张米尔

胡祥培 王兆华

编辑部主任:张利梅

出版:《科技和产业》编辑部

出版日期:2020年6月25日

印刷:北京博海升彩色印刷有限公司

国内刊号:CN11-4671/T

国际刊号:ISSN1671-1807

刊期:月刊

国内发行:北京报刊发行局

邮发代号:2-735

定价:10元/期,全年120.00元

通信地址:北京市学院南路86号

邮编:100081

电话:010-62174221

E-mail:kejichechanye@kjhecy.org

网址:www.kjhecy.org

中国期刊网(中国知网CNKI)全文收录期刊

万方数据库全文收录期刊

中文科技期刊数据库(全文版)源期刊

中国核心期刊(遴选)数据库收录

中国期刊全文数据库(CJFD)收录期刊

# 目次

科技金融发展能否促进中小制造业企业技术创新?

——基于中介效应检验模型 ..... 耿宇宁,周娟美,燕志鹏,刘玉强(1)

江苏高校科技成果转化制约因素与对策研究 ..... 赵敏,王健(9)

云南省先进装备制造业现状和发展策略 ..... 张维,常冬,姜大昌(16)

基于粒子群优化极限学习机的中长期电力需求预测研究 ..... 王婷,刘婷婷(21)

金融驱动因素对碳排放影响的实证分析

——基于福建省的数据研究 ..... 邱娟,苏努努,卓懋百(26)

基于灰色系统理论的广州总部经济产业关联研究 ..... 石立,刘承主(32)

MOOC网络的行为交互及影响因素研究 ..... 蔡河长(37)

基于产业创新系统模型的中国智能手机产业研究 ..... 李维维(44)

企业家精神、外部环境与创新效率 ..... 蔡雯(51)

生物医药产业创新生态系统构建与发展对策研究

——基于系统动力学 ..... 孙亚杰,王景(57)

数据足迹视域下的南粤古驿道旅游地形象感知研究

——以河源粤赣古驿道为例 ..... 伍新蕾(64)

陕西省制造业与生产性服务业的协调发展研究 ..... 于林霞,孙娜娜(69)

安徽省科技成果转化实践、挑战与路径 ..... 张政(75)

茶种植农户的经营现状及问题研究

——基于云南的例证 ..... 张焱,冯璐,李勃(80)

高质量发展经济评价体系的思考与探索 ..... 孔维嘉,邵云飞(85)

我国国防科技工业产业集聚发展现状及优化路径分析

..... 孙浩翔,李湘黔,董晓辉(92)

基于外部性理论的中廖村旅游扶贫研究 ..... 陈麒任,谢榕键(97)

工业互联网影响我国制造业转型升级的路径分析

..... 许磊,程广明,刘丕群,郭婧(103)

技术创新路径对制造业产业升级的影响研究 ..... 刘昕(107)

基于熵权法的进近管制培训指标分析及动态优化

..... 骆菁菁,唐卫贞,黄州升(112)

基于眼动实验的网页分类信息优化设计研究

..... 刘玮琳,孙立英,刘金波,万鹏(118)

民用航空发动机维修服务产品定价方法研究

..... 王向辉,蒋平,刘余,宋利(123)

超大直径深水盾构隧道人员安全疏散研究 ..... 彭佳湄(130)

某成品油管道岩石挤压段顶部应力响应

..... 赖少川,张平,何勇君,王垚(134)

盾构施工信息化管理研究与应用 ..... 陈先智,刘锋,李开华(138)

不停航施工期间机场机位资源管理研究

..... 杨梓,何秋钊,马代鑫,陈豪,李跃松(144)

基于TOPSIS的空管运行单位安全能力分类评估研究

..... 付新伟,杨昌其,肖奇(149)

海上油田负压作业有效负压值分析与管柱优化探讨 ..... 武广竣(154)

海上热采锅炉给水处理工艺研究与实践

..... 杨泽军,高鹏,陈子婧,窦培举,胡苇玮(160)

生态环境保护下的国际贸易的高质量发展研究 ..... 王华玲(165)

## CONTENTS

Can Sci-tech Finance Development Promote Technological Innovation of the Small and Medium-sized Manufacturing Enterprises  
——Based on the median effects test model ..... GENG Yu-ning, ZHOU Juan-mei, YAN Zhi-peng, LIU Yu-qiang(8)

Research on the Restrictive Factors and Countermeasures of the Transformation of Scientific and Technological Achievements in Jiangsu Universities ..... ZHAO Min, WANG Jian(15)

Current Situation and Development Strategy of Advanced Equipment Manufacturing in Yunnan Province  
..... ZHANG Wei, CHANG Dong, JIANG Da-chang(20)

Research on the Medium and Long-term Power Demand Forecasting Based on Particle Swarm Optimization Extreme Learning Machine ..... WANG Ting, LIU Ting-ting(25)

Empirical Analysis of Financial Drivers on Carbon Emissions  
——Data study based on Fujian province ..... QIU Juan, SU Nu-nu, ZHUO Mao-bai(31)

Research on the Industrial Association of Guangzhou Headquarters Economy Based on the Grey System Theory  
..... SHI Li, LIU Cheng-zhu(117)

Research on the Behavior Interaction and Influencing Factors of MOOC Network ..... CAI He-chang(79)

Research on Chinese Smart Phone Industry Based on Industrial Innovation System Model ..... LI Wei-wei(170)

Entrepreneurship, External Environment and Innovation Efficiency ..... CAI Wen(56)

Research on Construction and Development Countermeasures of Biomedical Industry Innovative Ecosystem  
——Based on System Dynamics ..... SUN Ya-jie, WANG Jing(63)

Study on the Image Perception of Ancient Post Road Tourist Attractions in Southern Guangdong from the Perspective of Data Footprint  
——Taking the ancient post road in Heyuan, Guangdong and Jiangxi as an example ..... WU Xin-lei(68)

Research on the Coupling and Coordinated Development of Manufacturing Industry and Producer Service Industry in Shaanxi Province ..... YU Lin-xia, SUN Jun-na(74)

Study on the Strategies for the Transformation of Scientific and Technological Achievements in Anhui Province  
..... ZHANG Zheng(79)

Study on the Situation and Problems of Farmers' Tea Management  
——Taking Yunnan as an example ..... ZHANG Yan, FENG Lu, LI Bo(84)

A Review of High-Quality Development Economic Evaluation System and Indicators ..... KONG Wei-jia, SHAO Yun-fei(91)

Analysis on Industrial Agglomeration Development Status and Optimization Path of Science and Technology Industry of National Defense in China ..... SUN Hao-xiang, LI Xiang-qian, DONG Xiao-hui(96)

A Study of Tourism Poverty Alleviation in Zhongliao Village Based on Externality Theory  
..... CHEN Qi-ren, XIE Rong-jian(102)

The Path Analysis of Industrial Internet Influencing the Transformation and Upgrading of China's Manufacturing Industry  
..... XU Lei, CHENG Guang-ming, LIU Pi-qun, GUO Jing(106)

Research on the Impact of Technological Innovation Path on Manufacturing Industry Upgrade ..... LIU Xin(111)

The Analysis and Dynamic Optimization of Approach Control Training Indexes Based on the Entropy Weight Method  
..... LUO Jing-jing, TANG Wei-zhen, HUANG Zhou-sheng(117)

Optimization Design of Webpage Classified Information Based on the Eye-tracking Experiment  
..... LIU Wei-lin, SUN Li-ying, LIU Jin-bo, WAN Peng(122)

Research on Pricing Method of Civil Aviation Engine Maintenance Service Products  
..... WANG Xiang-hui, JIANG Ping, LIU Yu, SONG Li(129)

Research on the Safety Evacuation in Large Diameter Underwater Shield Tunnel ..... PENG Jia-mei(133)

Stress Response at the Top of Rock Extrusion Section of a Product Oil Pipeline  
..... LAI Shao-chuan, ZHANG Ping, HE Yong-jun, WANG Gui(137)

Research and Application on Informatization Management of Shield Construction  
..... CHEN Xian-zhi, LIU Feng, LI Kai-hua(143)

Study on the Management of Airport Stand Resources During Non-Stop Construction  
..... YANG Zi, HE Qiu-zhao, MA Dai-xin, CHEN Hao, LI Yue-song(148)

Research on the Safety Capability Classification Evaluation of Air Traffic Control Operation Unit Based on TOPSIS  
..... FU Xin-wei, YANG Chang-qi, XIAO Qi(153)

Analysis of Effective Negative Pressure and Discussion of String Optimization in Offshore Oilfield ..... WU Guang-ai(159)

Process Study and Application of Boiler Feed Water Treatment System on Offshore Thermal Recovery Platform  
..... YANG Ze-jun, GAO Peng, CHEN Zi-jing, DOU Pei-ju, HU Wei-wei(164)

Research on the High Quality Development of International Trade under Ecological Environment Protection  
..... WANG Hua-ling(170)