

卷首语

- 1 以全球视野谋划和推动开源RISC-V生态发展
倪光南

专稿

- 6 美国国防高级研究计划局2014—2023财年预算的启示
王钊,李文娟,王强

科技工作者建议

- 14 推动中国开源软硬件发展的经验与建议
郭滕达,张明喜

专题:芯片前沿技术

- 20 后量子密码算法与芯片设计研究进展
刘冬生,李奥博,胡昂,陆家昊,黄天泽,杨朔,李翔,张嘉明
- 31 忆阻器及其存算一体应用研究进展
江之行,席悦,唐建石,高滨,钱鹤,吴华强
- 50 超导量子芯片硅穿孔填充技术
郑伟文,栾添,张祥

- 58 中美博弈背景下中国汽车芯片产业的困境及建议
霍佳鑫,李哲

综述

- 67 亚胺类共价有机框架研究进展
楚正坤,刘洁
- 79 混合动力汽车电池寿命预测及能量控制管理策略
武旭东,王靖岳,薛春伟,郑璐文,雷虎,王军年

- 90 铁尾矿资源化利用现状与发展策略
张振国,王月,陈军典,高倩

- 104 我国矿山智能机器人应用现状及发展策略
付恩三

论文

- 111 地质构造因素对煤与瓦斯突出的影响
苗彦平,郑旭鹤,王宏梁,折刚
- 120 基于改进粒子群算法的换流站多协议无线数据分析及预测
毛春翔,柴斌,刘若鹏

Foreword

- 1 Plan and promote the ecological development of open source RISC-V from a global perspective
.....*NI Guangnan*

Special to S&T Review

- 6 Budget analysis and enlightenment of DARPA from fiscal year 2014 to 2023
.....*WANG Zhao, LI Wenjuan, WANG Qiang*

Suggestions

- 14 Experience analysis and suggestions on promoting the development of open source software and hardware
.....*GUO Tengda, ZHANG Mingxi*

Exclusive: Frontier of Chip Technology

- 20 The development of post-quantum cryptography algorithm and chip design
.....*LIU Dongsheng, LI Aobo, HU Ang, LU Jiahao, HUANG Tianze, YANG Shuo, LI Xiang, ZHANG Jiaming*
- 31 Review of recent research on memristors and computing-in-memory applications
.....*JIANG Zhixing, XI Yue, TANG Jianshi, GAO Bin, QIAN He, WU Huaqiang*
- 50 Through silicon via filling technologies in superconducting quantum*ZHENG Weiwen, LUAN Tian, ZHANG Xiang*

- 58 The difficulties and countermeasures of China's automotive chip industry in the context of the US-China game
.....*HUO Jiaxin, LI Zhe*

Reviews

- 67 Research progress of imine covalent organic frameworks*CHU Zhengkun, LIU Jie*
- 79 Review of battery life prediction and energy control management strategies for hybrid electric vehicles
...*WU Xudong, WANG Jingyue, XUE Chunwei, ZHENG Junwen, LEI Hu, WANG Junnian*
- 90 Current situation and countermeasures of iron tailings resource utilization
.....*ZHANG Zhengguo, WANG Yue, CHEN Jundian, GAO Qian*
- 104 Application status and development suggestions of intelligent mine robots
.....*FU Ensan*

Papers

- 111 Influence of geological structural factors for coal and gas outburst
.....*MIAO Yanping, ZHENG Xuhe, WANG Hongliang, SHE Gang*
- 120 Research on multi-protocol wireless data analysis and prediction of converter station based on improved particle swarm algorithm
...*MAO Chunxiang, CHAI Bin, LIU Ruopeng*