

# 南京师范大学学报

## 工程技术版

2019 年 12 月 第 19 卷第 4 期(总第 76 期)

### 目 录

#### 2019 全国集成电路可靠性学术会议专栏

我国电力芯片设计中的电磁兼容技术综述 ..... 刘耀东,孙 然,姜文超,刘 轩,张 赞(1)  
40 nm IC 静态和动态 ESD 测试及失效分析

..... 赵军伟,乔彦彬,张海峰,陈燕宁,李杰伟,符荣杰(8)

基于 FEKO 软件的星载天线 EMC 仿真 ..... 张宇环,任红宇,张助玲,苏 醒,王 盛(13)  
基于大功率变电柜的电磁特性研究

..... 张 军,王永安,孙明辉,黄俊硕,赵旭东,邱 巍(19)

电力无线专网电磁场传输特性研究 ..... 钱君霞,杨承潘,王 亮,刘 铨,颜 伟(26)

接有冲击性负荷的微电网电能质量分析 ..... 管伟翔,钱君霞,王 亮,张海龙,王恩荣(32)

变电站 4G 传输安全电磁干扰研究 ..... 马鸿娟,涂新奇,贾寅森,颜 伟(38)

驱动电压过冲对舵控系统传导 EMI 影响及抑制 ..... 王 壮,吕 弘,陈 旻(44)

基于改进天棚阻尼的半主动悬架系统动力学与电磁兼容特性分析

..... 高 翔,邱 巍,沈林林(49)

磁耦合谐振式电动汽车无线充电桩的电磁特性研究

..... 邓凌翔,侯士亮,杨承潘,方举昊,陈 健,黄俊硕(56)

抑制辐射骚扰的磁环特性建模研究及其应用 ..... 孙明辉,王永安,赵 阳,邱 巍(62)

开关电源传导 EMI 分析及抑制方法研究 ..... 陈宝祥,祝志博,黄俊硕,王永安(70)

Boost PFC 电路辐射 EMI 分析与抑制研究 ..... 鲍怡伶,张浩然,赵 阳(75)

Ansys SIwave 仿真平台在开关电源 PCB 板中的应用 ..... 周 敏,白婉宁,曹 弋(81)

基于孔缝设计的开关电源外壳电磁屏蔽特性研究

..... 白婉宁,赵 阳,刘强强,蓝雨晨,邱 巍(86)

数字量输入式电能表在线校验方法及系统的研究

..... 陈 涛,王永安,邱忠梅,李 林,黄俊硕(92)

#### 计算机工程

基于卷积神经网络的仓储物体检测算法研究 ..... 王 飞,陈亮杰,王 梨,王 林(99)

#### 化学工程

连续减压侧线精馏精制 200 号聚醚胺的模拟与实验研究

..... 李 松,苏 复,顾正桂,曹晓艳(106)

《南京师范大学学报(工程技术版)》第 19 卷(2019)总目次 ..... ( I )

【期刊基本参数】CN32-1684/T \* 2001 \* q \* A4 \* 112 \* zh \* P \* ¥6.00 \* 900 \* 18 \* 2019-12

主 编:胡敏强

执行主编:陆炳新

执行编辑:陈 庆

英文编辑:司联合

# JOURNAL OF NANJING NORMAL UNIVERSITY

## ( ENGINEERING AND TECHNOLOGY EDITION)

Vol. 19 No. 4

Dec, 2019

### CONTENTS

#### Special Issue of 2019 National Integrated Circuit Reliability Academic Conference

- Summary of EMC Technology in Design of Power Chip in China ..... Liu Yaodong, Sun Ran, Jiang Wenchao, Liu Xuan, Zhang Yun (1)
- Static and Dynamic ESD Testing and Failure Analysis for 40 nm IC Products  
..... Zhao Junwei, Qiao Yanbin, Zhang Haifeng, Chen Yanning, Li Jiawei, Fu Rongjie (8)
- EMC Simulation of Satellite Antenna Based on FEKO ..... Zhang Yuhuan, Ren Hongyu, Zhang Zhuling, Su Xing, Wang Sheng (13)
- Research on Electromagnetic Characteristics of High Power Transformer Cabinet  
..... Zhang Jun, Wang Yongan, Sun Minghui, Huang Junshuo, Zhao Xudong, Qiu Wei (19)
- Research of Electromagnetic Field Transmission Characteristics of Electrical Wireless Network  
..... Qian Junxia, Yang Chengpan, Wang Liang, Liu Quan, Yan Wei (26)
- Power Quality Analysis of Microgrid with Impact Load ..... Guan Weixiang, Qian Junxia, Wang Liang, Zhang Hailong, Wang Enrong (32)
- Research on Safety Electromagnetic Interference of 4G Transmission in Substation ..... Ma Hongjuan, Tu Xinqi, Jia Yinsen, Yan Wei (38)
- Influence and Suppression of Conducted EMI from Drive Voltage Overshoot on the Actuator Systems ..... Wang Zhuang, Lü Hong, Chen Yang (44)
- Analysis of Dynamics and Electromagnetic Compatibility Characteristics of Semi-Active Suspension System Based on Improved Canopy Damping  
..... Gao Xiang, Qiu Wei, Shen Linlin (49)
- Study on Electromagnetic Characteristics of Magnetically Coupled Resonant Wireless Charging Piles for Electric Vehicles  
..... Deng Lingxiang, Hou Shiliang, Yang Chengpan, Fang Juhao, Chen Jian, Huang Junshuo (56)
- Research and Application of Magnetic Ring Characteristic Modeling for Suppression of Radiation Disturbance  
..... Sun Minghui, Wang Yongan, Zhao Yang, Qiu Wei (62)
- Research on Power Conducted EMI Analysis and Suppression Methods ..... Chen Baoxiang, Zhu Zhibo, Huang Junshuo, Wang Yongan (70)
- Research on Radiation Electromagnetic Interference Analysis and Suppression of Boost PFC Circuit  
..... Bao Yiling, Zhang Haoran, Zhao Yang (75)
- Application of Ansys SIwave Simulation Platform in Switching Power Supply ..... Zhou Min, Bai Wanning, Cao Yi (81)
- Research on Electromagnetic Shielding Characteristics of Switching Power Supply Enclosure Based on Hole Slot Design  
..... Bai Wanning, Zhao Yang, Liu Qiangqiang, Lan Yuchen, Qiu Wei (86)
- Analysis and Research of Digital Input Type Electric Energy Meter Calibration Device and Online Verification System  
..... Chen Tao, Wang Yongan, Qiu Zhongmei, Li Lin, Huang Junshuo (92)

#### Computer Engineering

- Research on Warehouse Object Detection Algorithm Based on Convolutional Neural Network  
..... Wang Fei, Chen Liangjie, Wang Li, Wang Lin (99)

#### Chemical Engineering

- Simulation and Experimental Study on Refining No.200 Polyetheramines by Continuous and Vacuum Side-Line Distillation  
..... Li Song, Su Fu, Gu Zhenggui, Cao Xiaoyan (106)

**Total Catalogue of Journal of Nanjing Normal University(Engineering and Technology Edition) in 2019 ..... ( I )**

**Editor-in-Chief:** HU Minqiang; **Executive Editor-in-Chief:** LU Bingxin; **Executive Editor:** CHEN Qing;  
**Translation Editor:** SI Lianhe

**The End of Volume 19**