

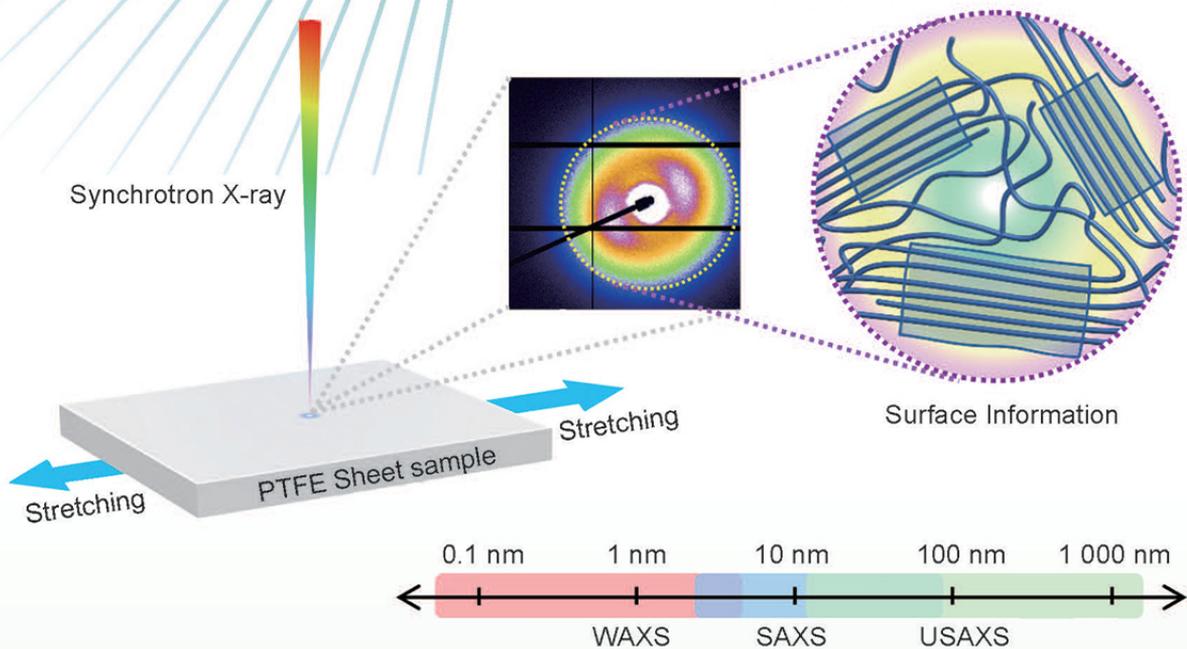
中国科技核心期刊  
中国科学引文数据库(CSCD)收录期刊  
国际核信息系统(INIS)收录期刊  
Elsevier Scopus数据库收录期刊  
美国化学文摘(CA)收录期刊  
日本科学技术文献速报(CBST)收录期刊

ISSN 1000-3436  
CN 31-1258/TL  
CODEN: FYYXEA

Vol.40 No.3  
2022.6

# 辐射研究与 辐射工艺学报

Journal of Radiation Research  
and Radiation Processing



同步X射线散射技术研究变温及拉伸后聚四氟乙烯的微观结构变化 (P.030201)



主办

中国科学院上海应用物理研究所

# 辐射研究与辐射工艺学报

Fushe Yanjiu Yu Fushe Gongyi Xuebao

2022年6月 第40卷 第3期

## 目次

### 综述

热-氧-辐照复合环境下硅泡沫加速老化研究进展 .....岳动华 靳凡 韦利明 王罗斌 (030101)

### 辐射化学

同步X射线散射技术研究变温及拉伸后聚四氟乙烯的微观结构变化 .....沙飞翔 程国君 田丰 唐忠锋 (030201)

辐射接枝改性实现酸性染料在棉布表面的绿色印染 .....俞立帆 刘泽鹏 王自强 李林繁 虞鸣 李景烨 (030202)

紫外光辐照引发接枝制备卤胺抗菌棉织物 .....陈雨洁 李章亮 王春霞 马志鹏 (030203)

Ti与Ag离子顺次注入SiO<sub>2</sub>合成TiO<sub>2</sub>纳米结构及其光催化活性 .....杨佳慧 王刚 刘昌龙 (030204)

### 辐射技术的应用

接触辉光放电等离子体对紫花苜蓿种子萌发的促进作用及处理工艺 .....徐毓鸿 龙海涛 王婷 董文科 薛华丽 蒲陆梅 (030401)

重离子辐照诱变增强枯草芽孢杆菌纤维素降解能力 .....张丽敏 李永丽 胡建华 崔金娜 刘占英 朱明达 (030402)

医疗废弃物电子束辐照灭菌处理效果 .....朱焕铮 张涛 韩筠松 陈海 何仕均 (030403)

电子束辐照加工产品剂量分布预测方法与验证 .....覃怀莉 刘燕琴 梁爱凤 戚文元 郭宏 史浩 王强 (030404)

### 辐射防护

植被对特高压交流输电线路电磁暴露的影响 .....黄汇益 逯迈 (030601)

基于多属性决策的核事故应急救援方案选择优化 .....邓多成 陈春花 阮方 赵恒柱 朱婧娴 汪建业 (030602)

### 辐射交叉学科研究

X射线计算机断层扫描成像在纺织技术中的应用 .....郭伟娜 高彦涛 胡文锋 吴湘济 (030701)

# Journal of Radiation Research and Radiation Processing

Vol.40 No.3

June 2022

## Contents

### REVIEW

Research progress on accelerated aging of silicon rubber foam under thermo-oxygen-irradiation complex conditions .....  
.....YUE Donghua JIN Fan WEI Liming WANG Luobin (030101)

### RADIATION CHEMISTRY

Analysis of microstructural deformation in polytetrafluoroethylene under heating or stretching conditions by synchrotron X-ray scattering.....SHA Feixiang CHENG Guojun TIAN Feng TANG Zhongfeng (030201)

Radiation grafting of cotton fabric for “green” dyeing with acid dyes .....  
.....YU Lifan LIU Zepeng WANG Ziqiang LI Linfan YU Ming LI Jingye (030202)

Preparation of N-halamine treated antibacterial cotton fabric via UV irradiation .....  
.....CHEN Yujie LI Zhangliang WANG Chunxia MA Zhipeng (030203)

Synthesis and photocatalytic activity of TiO<sub>2</sub> nanostructures by sequential implantation of Ti and Ag ions into SiO<sub>2</sub> .....  
.....YANG Jiahui WANG Gang LIU Changlong (030204)

### RADIATION TECHNOLOGY APPLICATION

Effects of contact glow discharge plasma and seed treatment methodology on alfalfa seed germination .....  
.....XU Yuhong LONG Haitao WANG Ting DONG Wenke XUE Huali PU Lumei (030401)

Breeding of a high-cellulose degrading *Bacillus subtilis* by heavy ion mutagenesis .....  
.....ZHANG Limin LI Yongli HU Jianhua CUI Jinna LIU Zhanying ZHU Mingda (030402)

Sterilization of medical waste by electron beam .....  
.....ZHU Huanzheng ZHANG Tao HAN Yunsong CHEN Hai HE Shijun (030403)

Research and verification of dose distribution prediction methods for electron beam irradiated products .....  
.....QIN Huaili LIU Yanqin LIANG Aifeng QI Wenyuan GUO Hong SHI Hao WANG Qiang (030404)

### RADIATION PROTECTION

Effect of vegetation on electromagnetic exposure of 1 000 kV ultra high voltage AC transmission line .....  
.....HUANG Huiyi LU Mai (030601)

Optimization of the nuclear accident emergency rescue plan selection based on a multiple-attribute decision .....  
.....DENG Duocheng CHEN Chunhua RUAN Fang ZHAO Hengzhu ZHU Jingxian WANG Jianye (030602)

### RADIATION INTERDISCIPLINARY RESEARCH

Applications of X-ray computed tomography in textile field.....GUO Weina GAO Yantao HU Wenfeng WU Xiangji (030701)