

专稿 Feature

14 面向民机典型系统健康管理的故障诊断技术综述与展望

冯蕴雯 王锐 陈俊宇 路成
Review and Prospect of Health Management Technology for Civil Aircraft Typical System

FENG Yunwen WANG Rui CHEN Junyu LU Cheng

封面文章 Cover Story

36 飞机复合材料壁板装配应力控制技术研究现状与展望

张永亮 姜杰凤 张辉 毕运波
Research Status and Prospect of Stress Control Technology for Aircraft Composite Panel Assembly

ZHANG Yongliang JIANG Jiefeng ZHANG Hui BI Yunbo

论坛 Forum

超材料 Metamaterial

56 微穿孔板-三周期极小曲面复合吸声超材料设计与声学特性研究

张明康 刘文斌 陈杰 王迪 王关皓
Design and Acoustic Characterization of Microperforated Plate-Triply Periodic Minimal Surface Hybrid Acoustic Metamaterials

ZHANG Mingkang LIU Wenbin CHEN Jie WANG Di WANG Guanhao

71 4D打印力学超材料及其在航空航天领域的应用

宋学昊 曾成均 刘立武 刘彦菊 冷劲松
Progress on 4D Printed Mechanical Metamaterials and Their Applications in Aerospace Field

SONG Xuehao ZENG Chengjun LIU Liwu LIU Yanju LENG Jinsong

87 离散组装机学超结构的晶格融合设计及性能调控研究

郭祥宇 朱楠 徐元铭 王昕 李振 李秉洋 王鹏飞
Hybrid Design and Performance Modulation of Discrete-Assembled Mechanical Metastructures

GUO Xiangyu ZHU Nan XU Yuanming WANG Xin LI Zhen LI Bingyang WANG Pengfei

98 动态调控电磁吸收材料研究进展

李泽钦 宋梓诚 张锐聪 王天宇 张智博 朱嘉琦
Progress in Dynamically Modulated Electromagnetic Absorbing Materials

LI Zeqin SONG Zicheng ZHANG Ruicong WANG Tianyu ZHANG Zhibo ZHU Jiaqi

- 117 通风消声承载多功能超材料设计及其增材制造研究
罗加杰 张邵基 张满弓 沈承 宋军 孟祥彦 宋波 史玉升
Study of Ventilated Acoustic Attenuation-Bearing Metamaterial: Design and Additive Manufacturing
LUO Jiajie ZHANG Shaoji ZHANG Mangong SHEN Cheng SONG Jun
MENG Xiangyan SONG Bo SHI Yusheng

研究论文 Research

- 128 轻量化高导热复合材料机匣设计技术研究
孟显铮 钟建锋 凡义超 杨锐博 戴宁 陈金
Research on Design Technology of Lightweight High Thermal Conductivity Composite Casing
MENG Xianzheng ZHONG Jianfeng FAN Yichao YANG Ruibo DAI Ning CHEN Jin
- 135 横向振动条件下航空用扩口式管接头密封性能分析
蔡泓叶 李牧晶 巩浩 刘检华 王凯
Analysis of Sealing Performance in Aeronautical Flared Tube Fittings Under Transversal Vibration Conditions
CAI Hongye LI Muxiao GONG Hao LIU Jianhua WANG Kai
- 145 钎焊温度对GH3030/B-Ni73CrSiB-40Ni-S/GH4648的接头组织与力学性能的影响
李博海 田博冰 黎刚 吴娟娟
Effect of Brazing Temperature on Microstructure and Mechanical Properties of GH3030/B-Ni73CrSiB-40Ni-S/GH4648 Joints
LI Bohai TIAN Bobing LI Gang WU Juanjuan
- 153 TiB_w/TA15复合材料持久/蠕变变形行为研究
刘莹莹 王富鑫 马小昭 付明杰 乔虹 张书铭
Study on Endurance/Creep Deformation Behavior of TiB_w/TA15 Composite
LIU Yingying WANG Fuxin MA Xiaozhao FU Mingjie QIAO Hong ZHANG Shuming
- 162 基于ScCO₂低温微量润滑工艺的CFRP/Ti6Al4V叠层结构钻削试验研究
李迎港 陈燕 杨浩骏 郭南 陈德雄
Experimental Study on Drilling of CFRP/Ti6Al4V Laminates Using ScCO₂-Based Cryogenic Minimum Quantity Lubrication
LI Yinggang CHEN Yan YANG Haojun GUO Nan CHEN Dexiong