

目 次

甲虫前翅结构及其仿生研究进展	陈锦祥, 关苏军, 王 勇 (1)
多壁碳纳米管/聚己内酯超细复合纤维的制备及性能	唐圣奎, 熊 杰, 谢军军, 张红萍, 肖红伟 (10)
碳纳米管的表面修饰及其对碳纳米管/氟橡胶复合材料导电性能的影响	徐 涛, 杨静晖, 刘际伟, 傅 强 (16)
碳纳米管的偶联剂修饰及其在环氧树脂复合材料中的应用	马传国, 于英俊 (22)
助溶剂驱使溶胶-凝胶化 SiO_2 /聚丙烯酸酯复合涂层	罗春晖, 瞿金清, 陈焕钦 (29)
悬浮聚合法制备纳米蒙脱土/聚合物(苯乙烯-共聚-二乙烯基苯)复合材料及性能	冯桂双, 李长生, 唐 华, 曹可生, 陈 娟, 王万杰 (36)
内置高温热管 C/C 复合材料热防护结构热力学耦合机制	刘冬欢, 郑小平, 王 飞, 刘应华 (43)
C/C 复合材料 $\text{SiC}/\text{ZrB}_2\text{-MoSi}_2$ 复合涂层的抗氧化机制	曾 毅, 张武装, 熊 翔 (50)
铜掺杂钙锰氧化物/聚吡咯复合物的制备、表征及其电化学性能	林生岭, 曹 旭, 陈传祥, 郭寅丹, 储艳文, 龙 丹, 万 勇 (56)
纳米 HA/PU 复合材料的力学性能和热性能	刘浩怀, 张 利, 李吉东, 黄 棣, 王妍璞, 李玉宝 (61)
HA/HDPE 多尺度生物复合材料微观强韧化机制	黄苏萍, 周科朝 (67)
聚乳酸-羟基乙酸共聚物/磷酸钙骨水泥多孔复合支架的制备	漆小鹏 (73)
一种预测反应性树脂体系黏度随时间变化关系的新方法	代晓青, 曾竟成, 肖加余, 江大志, 尹昌平 (78)
真空渗透成型工艺制件厚度变化规律	孙 静, 段跃新, 肇 研, 王 伟 (86)
GFRP 厚板制件固化过程固化度分布	刘卓峰, 曾竟成, 肖加余, 江大志, 代晓青 (92)
麦秸纤维增强聚丙烯复合材料的熔融流变性	潘明珠, 张述堰, 周定国 (99)
基于多重信号分类算法的复合材料冲击定位	苏永振, 袁慎芳, 王 瑜 (105)
树脂基搭接碳纤维智能层的力阻特性	朱四荣, 郑华升, 李卓球 (111)
界面对纤维增强陶瓷基复合材料拉伸性能的影响	杨成鹏, 矫桂琼 (116)
溶胶-凝胶法制备纳米 $\text{TiO}_2\text{-ZrO}_2/\text{Poly (MMA-co-MSMA)}$ 复合材料	李 立, 施利毅, 王 源, 冯 欣, 曹绍梅 (122)
颗粒性态的随机性对 $\text{SiC}_p/6061\text{Al}$ 复合材料棘轮行为影响的有限元分析	邵雪娇, 康国政, 郭素娟, 张 娟 (128)
NiO/Al 体系绝热温度的数值计算与试验验证	宋月鹏, 李江涛, 裴 军, 纪文文 (134)
添加微量 Ti 元素对 Diamond/Cu 复合材料组织及性能的影响	尹法章, 郭 宏, 张习敏, 贾成厂, 范叶明, 张永忠 (138)
复合材料分层问题中界面层方法的数值研究	陈丽华, 徐元铭, 刘 博 (144)
复合材料飞机结构技术成熟度评价方法	蓝元沛, 关志东, 孟庆春 (150)
直升机桨叶蒙皮大梁粘结面分层裂纹端部场分析	马存旺, 刘 勇, 张呈林 (155)
复合材料 I 形梁分层的光纤超声探测技术数值研究	许 颖, 喻 毅, 梁坚凝 (162)
一种基于复合材料加筋板结构效率的稳定性优化方法	赵 群, 丁运亮, 金海波 (169)
超高韧性水泥基复合材料碳化与渗透性能试验研究	徐世焱, 蔡新华 (177)
复相导电混凝土应用于损伤诊断的试验研究	丁一宁, 陈龙凤 (184)
管道翻衬修复技术用聚氨酯树脂体系配方的研究	张淑洁, 王 瑞, 张 丽 (190)
管道修复用管状纺织复合材料的管径设计	王 瑞, 张淑洁, 张 丽 (196)
Keywords for Composites	(200)
《复合材料学报》征稿简则	(封三)

CONTENTS

Progress in structural biomimetic research on forewing of beetles	CHEN Jinxiang, GUAN Sujun, WANG Yong (1)
Preparation and properties of multi-walled carbon nanotubes/poly (ϵ -caprolactone) ultrafine composite fibers	TANG Shengkui, XIONG Jie, XIE Junjun, ZHANG Hongping, XIAO Hongwei (10)
Surface modification of carbon nanotube and its influence on the conductivity property of carbon nanotube/fluoro-elastomer composite	XU Tao, YANG Jinghui, LIU Jiwei, FU Qiang (16)
Coupling agent modification of carbon nanotubes and their applications for epoxy resin composites	MA Chuanguo, YU Yingjun (22)
Co-solvents induced sol-gel-derived SiO_2 /polyacrylate composite films	LUO Chunhui, QU Jinqing, CHEN Huanqin (29)
Preparation and properties of nano-montmorillonite/polymer (styrene-co-divinylbenzene) composite by suspension polymerization	FENG Guishuang, LI Changsheng, TANG Hua, CAO Kesheng, CHEN Juan, WANG Wanjie (36)
Mechanism of thermomechanical coupling of high temperature heat pipe cooled C/C composite material thermal protection structure	LIU Donghuan, ZHENG Xiaoping, WANG Fei, LIU Yinghua (43)
Anti-oxidation mechanisms of the $\text{SiC}/\text{ZrB}_2\text{-MoSi}_2$ coating on the carbon/carbon composites	ZENG Yi, ZHANG Wuzhuang, XIONG Xiang (50)
Preparation and characterization of La-doped Ca manganese oxide/polypyrrole composites and its electrochemical properties	LIN Shengling, CAO Xu, CHEN Chuanxiang, GUO Yindan, CHU Yanwen, LONG Dan, WAN Yong (56)
Mechanical and thermal properties of nano-hydroxyapatite/polyurethane composites	LIU Haohuai, ZHANG Li, LI Jidong, HUANG Di, WANG Yanying, LI Yubao (61)
Toughening and reinforcement mechanism of multi-scale HA/HDPE composite	HUANG Suping, ZHOU Kechao (67)
Preparation of poly(lactic-co-glycolic acid)/calcium phosphate cement macroporous composite scaffold	QI Xiaopeng (73)
A new method for predicting the viscosity of reactive resin systems	DAI Xiaoqing, ZENG Jingcheng, XIAO Jiayu, JIANG Dazhi, YIN Changping (78)
Thickness change of process parts prepared by vacuum infusion process	SUN Jing, DUAN Yuexin, ZHAO Yan, WANG Wei (86)
Distribution of the cure degree for the thick GFRP laminates	LIU Zhuofeng, ZENG Jingcheng, XIAO Jiayu, JIANG Dazhi, DAI Xiaoqing (92)
Melt rheology of wheat straw fiber reinforced polypropylene composites	PAN Mingzhu, ZHANG Shuyin, ZHOU Dingguo (99)
Impact localization in composite using multiple signal classification method	SU Yongzhen, YUAN Shenfang, Wang Yu (105)
Piezoresistivity of overlapped carbon fiber polymer-matrix smart layer	ZHU Sirong, ZHENG Huasheng, LI Zhuoqiu (111)
Effects of interface on tensile properties of fiber reinforced ceramic matrix composites	YANG Chengpeng, JIAO Guiqiong (116)
Nano $\text{TiO}_2\text{-ZrO}_2$ /Poly(MMA-co-MSMA) composite prepared by sol-gel processing	LI Li, SHI Liyi, WANG Yuan, FENG Xin, CAO Shaomei (122)
Finite element analysis for effects of stochastic properties of particles on ratcheting of $\text{SiC}_p/6061\text{Al}$ composites	SHAO Xuejiao, KANG Guozheng, GUO Sujuan, ZHANG Juan (128)
Adiabatic temperature calculation and verification of NiO/Al aluminothermic system by computer simulation	SONG Yuepeng, LI Jiangtao, PEI Jun, JI Wenwen (134)
Effect of Ti on microstructures and properties of Diamond/Copper composites	YIN Fazhang, GUO Hong, ZHANG Ximin, JIA Chengchang, Fan Yemin, ZHANG Yongzhong (138)
Numerical study of cohesive zone approach for simulation of delamination in laminated composites	CHEN Lihua, XU Yuanming, LIU Bo (144)
Evaluation method for technology maturity of composite aircraft structure	LAN Yuanpei, GUAN Zhidong, MENG Qingchun (150)
Analysis of delamination crack tip fields for adhesive surface between skin and spar for helicopter blades	MA Cunwang, LIU Yong, ZHANG Chenglin (155)
Numerical study on delamination detection in I-section GFRP beam with optical fiber-based ultrasonic technique	XU Ying, YU Yi, LEUNG K Y Christopher (162)
Buckling optimization method based on structure efficiency of composite stiffened panels	ZHAO Qun, DING Yunliang, JIN Haibo (169)
Experimental studies on permeability and carbonation properties of ultra high toughness cementitious composites	XU Shilang, CAI Xinhua (177)
Experimental studies of diphasic electric conduction concrete applying in the diagnosis of the damification	DING Yining, CHEN Longfeng (184)
Study on formulation of PU resin for pipeline lining rehabilitation technology	ZHANG Shujie, WANG Rui, ZHANG Li (190)
Design of pipediameter of tubular textile composite for pipeline rehabilitation	WANG Rui, ZHANG Shujie, ZHANG Li (196)