



**ENGINEERING
PLASTICS
APPLICATION**
(EPA)
Monthly
(Started Publication in 1973)
Vol.47, No.7, 2019
(Series No.357)
Published on Jul. 10, 2019

Superintended by
China North Industries Group Corporation

Sponsored by
CNGC Institute 53, etc.

Editor & Publisher
The Magazine House of
ENGINEERING PLASTICS APPLICATION

Director & Chief Editor Wang Jinli

Executive Chief Editor Zhang Zhen

Add No.3 Tianzhuang East Road, Tianqiao
District, Jinan, China

Postcode 250031

Tel +86 531 85878057 85878224
85878220 85878223

Fax +86 531 85947355

E-mail epa@epa1973.com

Website www.epa1973.com
www.epa1973.net

Distributor Abroad
China International Book Trading Corporation
(P.O. Box 399, Beijing 100044, China)

Distributing Code Abroad 4503 MO

Unified Number of Print

ISSN 1001-3539
CN 37-1111/TQ

Duty Editor Lyu Zhaosheng
Tan Guichun
Luan Weitao

Main Contents

Materials & Applications

- Synthesis and Properties of In-situ Polymerized Flame Retardant High Temperature Nylon PA10T10DDP.....Chang Huan, Ye Nanbiao, Yan Kun, et al(1)
- Preparation and Properties of Highly Elastic Degradable Polyacrylamide / Gelatin / Polyvinyl Alcohol Triple Network Hydrogels.....Jing Zhanxin, Zhou Jiaime, Xiao Weiyu, et al(7)
- Development of ZDP / nano-Al₂O₃ Flame Retardant Modified PET Extrusion Foaming MaterialGao Liang, Ge Yukai, Xu Zhimei, et al(14)
- Effects of γ -irradiation on Properties of PE-LLD / EVAC / Mg(OH)₂ / MRP Composites.....Tian Qingliang, Guo Wenhui, Zhang Zhenya, et al(22)
- Properties of Flame Retardant PP / PUR-T Composites Modified by Titanate-Ammonium Polyphosphate.....Liao Yijun, Wu Xiaoli, Liang Haotian, et al(28)
- Preparation and Characterization of PVDF / GO Composite Membranes with UV-absorbing Performance.....Li Xiangyang, Huangpu Liucheng, Dong Li(34)
- Effects of Graphene on Foaming Properties of Polypropylene.....Zhang Yuliang, Yang Zhenyuan, Li Rongxun, et al(39)
- Development and Characterization of PP Materials Used for Expansion Water Tank of AutomobileLiu Sugin, Li Chunsong, He Jie, et al(44)
- Preparation and Properties of Flexible Transparent Polyurethane Elastomer.....Li Haizhu, Xu Qinfu, Yi Haixia, et al(49)

Process Technology

- Population Balance Simulation for Evolution of Cell Structure during Extrusion Foaming of PS / Supercritical CO₂.....Liu Jingman, Yan Shuilin, Zong Yuan, et al(54)
- Effect of Different Guide Structure Materials on Thickness of Flexible Guided 3D Weaving Layer of Composites.....Hou Zhuojian, Liu Feng, Shan Zhongde, et al(60)
- Numerical Simulation of Heat Transfer Coupled with Reaction of Glass Fiber Reinforced Nylon 6 Composites by RTM.....Sun Hua, Xue Ping, Chen Ke, et al(65)
- Influences of FDM Process Parameters on Mechanical Properties of PLA Parts.....Zhang Linchu, Wang Yu, Chen Xia(71)
- Unbalanced Filling Experiments of Injection Plastic Parts with Microstructure.....Xu Bin, Xue Song, Deng Ailin, et al(77)

Machinery & Moulds

- Design of Mould with Two-Group Harvard Slider Mechanism for Thin Wall Purification Bucket of Rice Noodles.....Chen Caihong, Liu Shengyong, Wei Min(83)
- Design of Compression Molding Device for Carbon Fiber Reinforced Plastic Airborne ChassisJia He, Song Guizhen, Cheng Jianming, et al(88)
- Design of Injection Mould and Inclined Top Ejecting Mechanism with Secondary Ejection of Data Line Plug Cover.....Feng Wenjian, Huang Zhenjin, Wang Huajin(93)

Analysis & Ageing

- Tensile Mechanical Model and Parameter Analysis of Spandex with Different Diamine Chain Extender Ratio.....Wang Jiaqi, You Gexin(100)
- Coupled FEM-SPH Simulation for Impact Resistance of Polyurea / Ceramic Composite Plates Against Blunt Projectiles.....Xiao Yihua, Wu Hecheng(105)

Fillers & Additives

- Dielectric Properties of Different Inorganic Modified Thermotropic Liquid Crystalline Polymer (TLCP) Materials.....Zhou Guangliang, Xiao Zhongpeng, Jiang Sujun(110)
- Influences of Aramid Pulp Content on Friction-Wear Performances of Low Resin-based Brake Pads.....Liu Li, Li Jijing, Zhong Li(114)
- Preparation and Properties of POM Toughened by Thermoplastic Polyurethane Elastomer.....Chen Jian, Bie Mingzhi(119)
- Effects of Different Fibers on Electromagnetic Shielding Properties of Benzoxazine Resin Matrix Composites.....Wang Ming, Zheng Zhicai, Xiao Yachao, et al(124)
- Green Synthesis Process of Plasticizer Tri-n-Butyl Citrate.....Hu Wenshan, Chen Jinwei, Feng Ansheng, et al(129)

Summary

- Research Progress on Recycling and Reuse Technology of Carbon Fiber Reinforced Thermo-setting Composites.....Zhang Lingjing, Chen Hua, Jiang Jianjun, et al(134)
- Research Progress on Surface Modification of Carbon Fiber and Its Application in Polyamide Composites.....Zhang Dingding, Zhang Fuhua, Yang Jixiang, et al(141)
- Preparation Research Development of Polymer Brushes based on Controlled / Living Radical Polymerization.....Zhao Lei, Tan Haoxuan, Zheng Yufei, et al(147)
- Research Progress of Polypropylene / Plant Fiber Composites.....Wang Jangkai, Su Mengyu, Sun Zhanying, et al(151)