

## 일반논문

|                                                                                                             |                                                                            |    |
|-------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------|----|
| PMMA가 그래프트된 실리카 나노입자를 포함한 불소계 폴리이미드 복합 분리막의 기체 투과 특성                                                        | 권유미 · 임현구 · 김주현 <sup>†</sup>                                               | 1  |
| 반경질 폴리우레탄 발포체의 물성에 대한 사슬 연장제와 무기 충전제의 영향                                                                    | 차국찬 <sup>†</sup> · 송점식 · 이석민 · 문무성                                         | 8  |
| 석조문화재를 위한 아크릴계 보존처리제의 무기친화성 개선                                                                              | 김연철 · 김은영 · 김형중 <sup>†</sup>                                               | 14 |
| 스타이렌 술폰산 고분자가 그래프트된 ETFE 막의 방사선 제조 방법 및 특성 분석                                                               | 고범석 · 강성아 · 경비 · 전준표 · 노영창 · 강필현 · 김종일 · 신준화 <sup>†</sup>                  | 20 |
| 무전해 니켈 도금된 폴리스티렌 복합 입자 제조 및 도금 조건의 영향                                                                       | 김병철 · 박진홍 · 이성재 <sup>†</sup>                                               | 25 |
| 폴리(비닐 신나메이트)와 올리고머 신나메이트 블렌드를 기반으로 한 그루브 패턴 표면의 광배향막                                                        | 성시준 · 김미리 · 안도원 · 김대환 · 강진규 · 박정기 · 조국영 <sup>†</sup>                       | 32 |
| 탄산칼슘/유기계 Core-Shell 입자의 제조와 물성에 관한 연구                                                                       | 설수덕 <sup>†</sup>                                                           | 38 |
| 실리카 화합물을 함유한 PVA/PAM 전해질 막의 제조 및 특성과 직접메탄을 연료전지로의 응용                                                        | 윤석원 · 김대훈 · 이병성 · 이보성 · 문고영 · 변홍식 · 임지원 <sup>†</sup>                       | 45 |
| 카르복실산계 환원제를 통한 저융점 솔더입자가 포함된 이방성 전도성 집착제의 젖음 특성 향상 연구                                                       | 김효미 · 김주현 <sup>†</sup>                                                     | 52 |
| 유화중합에 의한 전분-아크릴 고분자의 합성에 관한 연구                                                                              | 이미숙 · 류 훈 · 조을룡 <sup>†</sup>                                               | 58 |
| PLGA의 염증완화에 대한 피브린의 효과 ; <i>in vivo</i> 연구                                                                  | 김수진 · 홍현혜 · 김순희 · 김혜린 · 김세호 · 강길선 <sup>†</sup>                             | 63 |
| 브롬화된 부틸고무의 탈브롬화 및 이성질체화 메커니즘에 대한 연구                                                                         | Yibo Wu, Wenli Guo <sup>†</sup> , Shuxin Li, Liangfa Gong, and Yuwei Shang | 69 |
| 다양한 전자선 전류 조건에서 조사된 폴리에틸렌 분리막의 특성 연구                                                                        | 임종수 · 손준용 · 신준화 · 임윤목 · 최재학 · 김정수 · 노영창 <sup>†</sup>                       | 74 |
| Poly( <i>N</i> -isopropylacrylamide- <i>co</i> -dimethylamino ethyl methacrylate)가 고정화된 알지네이트 비드 제조 및 방출 특성 | 강미경 · 김진철 <sup>†</sup>                                                     | 79 |

## 단신

|                                                 |                              |    |
|-------------------------------------------------|------------------------------|----|
| 폴리(옥틸티오펜)/폴러렌 벌크 이중접합의 광기전성에 미치는 CIS 입자의 블렌딩 효과 | 조영돈 · 이선형 · 김정수 <sup>†</sup> | 84 |
|-------------------------------------------------|------------------------------|----|

## Articles

- Synthesis and Characterization of New Poly (ester-imide)s Based on 1,3-bis[4,4'-bis(trimellitimido)phenyl]-2-propenone and Aromatic Diols  
**Khalil Faghihi\* and Mohammad Gholizadeh** 2
- Effects of Polythiophene as a Photosensitizer on Dynamic and Steady-State Photorefractive Performance in Polymeric Composites  
**Jin-Woo Oh\*, Jongwan Choi, Bich Thi Luong, and Nakjoong Kim\*** 8
- Microstructure and Properties of Rigid Rod-like Polyimide/Flexible Coil-like Poly (amide-imide) Molecular Composite Films  
**Youri Ha, Myeon-Chon Choi, Il Kim, Chang-Sik Ha\*, Youngkyoo Kim, and Mijeong Han** 14
- Modification of Epoxy Resin with Polyether-grafted-Polysiloxane and Epoxy-Miscible Polysiloxane Particles  
**Songqi Ma, WeiQu Liu\*, Dan Yu, and ZhengFang Wang** 22
- Preparation and Biocompatibility Study of Gelatin/Kappa-carrageenan Scaffolds  
**Youn-Mook Lim\*, Hui-Jeong Gwon, Jae-Hak Choi, Junwha Shin, Young-Chang Nho, Sung In Jeong, Moo Sang Chong, Young-Moo Lee, Il Keun Kwon, and Sung Eun Kim** 29
- Conductivity and Thermal Behavior of Proton Conductor Based on Poly (vinylpyrrolidone) Complexed with Ammonium Perchlorate  
**Byoung-Koo Choi\* and Byul Jang** 35
- Organic-Inorganic Hard Coating Layer Formation on Plastic Substrate by UV Curing Process  
**Soo Hee Lee, Hyun Gi Kim, and Sung Soo Kim\*** 40
- Composition-Dependent Curing Behavior and Peel Strength of Epoxy Resins for Printed Circuit Boards (PCBs)  
**Jae-Choon Cho, Hwa-Young Lee, Sung-Taek Lim, Moon-Soo Park, Yong-Soo Oh, Mi-Suk Cho, and Young-kwan Lee\*** 47
- Hydroxypropyl Methylcellulose-graft-Poly (ethyl acrylate-co-methyl methacrylate) Particles by Resin-fortified Emulsion Polymerization  
**Hyon Ho Back, Jung Min Lee, Ji Eun Cho, Jin Hun Cho, Jung Hyun Kim\*, and In Woo Cheong\*** 53
- Synthesis of Poly (vinyl alcohol) (PVA) Nanofibers Incorporating Hydroxyapatite Nanoparticles as Future Implant Materials  
**Faheem A. Sheikh, Naseer A. M. Barakat\*, Muzafar A. Kanjwal, Soo Jin Park, Dae Kwang Park, and Hak Yong Kim\*** 59
- High In-Plane Alignment of Liquid Crystalline Methacrylate Copolymers Bearing Photoreactive 2-Styrylpyridine and Mesogenic 4-Methoxybiphenyl Groups  
**Giseop Kwak, Hyeryun Kim, Min-Woo Kim, Seok-Hee Hyun, Chang-Hoon Back, Woo-Sik Kim\*, Hak-Sang Im, and Il-Ryon Jeon** 67
- Properties of Polyurethane/Hectorite Nanocomposite Elastomer Using Reactive Organifier  
**Duk Man Yu, Hua Jin, and Sung Chul Kim\*** 73
- Liquid Crystal Alignment Properties of Polystyrene Derivatives Containing Fluorinated Side Groups  
**Hyo Kang, Jong-Chan Lee\*, and Daeseung Kang** 78

## Notes

- Study on the Interaction of Matrine with Human Serum Albumin in Aqueous Solution  
**Xiangjun Sun, Xiangyu Xu, Min Liu, Linwei Li\*, and Dezhi Sun** 86
- Cellular Responses and Behaviors of Adipose-Derived Stem Cells onto  $\beta$ -Glucan and PLGA Composites Surface-Modified by Microwave-Induced Argon Plasma  
**Yeon I Woo, Mi Hee Lee, Hye-Lee Kim, Jong-Chul Park\*, Dong-Wook Han, Jeong Koo Kim, Kazufumi Tsubaki, Kie-Hyung Chung, Soon O. Hyun, and Young-Il Yang** 90
- Effect of Internal Lewis Base on Active Site Distribution for Ethylene/1-Octene Copolymerization by  $\text{TiCl}_4$ /Lewis Base/ $\text{MgCl}_2$  Catalysts  
**Luhai Wang, Min Yang, Hegang Ren, Wei Cui, Binyuan Liu\*, Weidong Yan, and Il Kim\*** 94

## Feature Articles

- Electrorheologically Intelligent Polyaniline and Its Composites **Fei Fei Fang, Bo Mi Lee, and Hyoung Jin Choi\*** 99

## Articles

- Synthesis, Characterization and Electrical Properties of Novel Steric Phthalocyanine Polymers  
**Qiang Liang\*, Peng Zhao, Je-Wan Woo, Yong-Sung Park, Lihong Niu, and Fushi Zhang** 113
- Preparation and Characterization of Polyimide/Modified  $\beta$ -Cyclodextrin Nanocomposite Films  
**Taesung Lee, Jihan Lim, Ildoo Chung, Il Kim, and Chang-Sik Ha\*** 120
- A Study of the Ionic Liquid Mediated Microwave Heating for the Synthesis of New Thermally Stable and Optically Active Aromatic Polyamides under Green Procedure  
**Shadpour Mallakpour\* and Mohammad Dinari** 129
- Characterization of Cross-linked Gelatin Nanofibers through Electrospinning  
**Jong Hyun Ko, HaiYan Yin, Jeongho An, Dong June Chung\*, Ji-Heung Kim, Soo Bok Lee, and Do Gi Pyun** 137
- Fabrication, Structures and Properties of Acrylonitrile/Vinyl Acetate Copolymers and Copolymers Containing Microencapsulated Phase Change Materials  
**Na Han\*, Xing-xiang Zhang, Xue-chen Wang, and Ning Wang** 144
- Design of a Multifunctional Heparin-based Nanoparticle System for Anticancer Drug Delivery  
**Li Li, Kang Moo Huh, Yong-Kyu Lee, and So Yeon Kim\*** 153
- PA6/MWNT Nanocomposites Fabricated Using Electrospun Nanofibers Containing MWNT  
**Byoung-Sun Lee and Woong-Ryeol Yu\*** 162
- Synthesis of Cyclic Diepoxide-HALS Addition Polymers and Their Photostabilizing Effects on Styrenic Polymers  
**Kyu Ho Chae\* and Jin Hyeok Kim** 170
- Thermoplastic Polyurethane Elastomer/Thermoplastic Polyolefin Elastomer Blends Compatibilized with a Polyolefinic Segment in TPU  
**Tae Kyoan Kim, Byung Kyu Kim\*, Sang Yun Lee, Yang Lac Cho, Min Seok Kim, and Han Mo Jeong\*** 177
- Synthesis and Characterization of Highly Conjugated Cyclopenta[def]phenanthrene-Based Polymers  
**Sang Hun Jang, Truong Ba Tai, Ji Hee Park, Hee Jeong Jeong, Eun Jeong Chun, Yun-Hi Kim, Sang-Gyeong Lee\*, Okram Mukherjee Singh, Yong Jin Yoon, and Soon Ki Kwon\*** 185
- Controlling the Degradation of pH/Temperature-Sensitive Injectable Hydrogels Based on Poly( $\beta$ -amino ester)  
**Dai Phu Huynh, Minh Khanh Nguyen, and Doo Sung Lee\*** 192

## Notes

- Effect of Poly(amic acid)-treated BaTiO<sub>3</sub> on the Dielectric and Mechanical Properties of BaTiO<sub>3</sub>/Polyimide Composites  
**Joohyun Lee, Youngjun Ko, and Jinhwan Kim\*** 200
- Drug Release Characteristics of Modified PHEMA Hydrogel Containing Thermo-responsive Pluronic Copolymer  
**Kwang Hyun Hong, Young-Sil Jeon, Dong June Chung, and Ji-Heung Kim\*** 204
- Synthesis of Poly(*N*-isopropylacrylamide)/Poly(ethyl-2-cyanoacrylate) Composite Hollow Particles  
**Yun Jig Lee, In Woo Cheong\*, Jeong Hyun Yeum, and Yeon Uk Jeong** 208
- Heat-induced Crack Healing in a Perfluorocyclobutane-Containing Polymer  
**Sung-Youl Cho, Chan-Moon Chung\*, Joong-Gon Kim, and Se-Young Oh** 212