



황 준 성 전임연구원

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Lab: Biomaterials Laboratory

Research Interests

- Organic nano materials science
- Polymer materials process
- Biomedical materials

Education

- 2013: Yeungnam University (M.S. in Organic advanced materials engineering)
- 2005: Yeungnam University

Professional Experience

- 2015-Present: Researcher, DGIST, Korea

Introduction to Research

Nanotechnology is the study of extremely small structured molecule (size of 1 to 1000 nm). Nano medicine is a relatively new field of science and technology. Nanomedicine ranges from the medical applications of onmaterial"s and biological devices to nanoelectronic biosensors used in medical field. Nanotechnology or systems device manufacture at the molecular level, is a multidisciplinary scientific field undergoing explosive development. This potential of nanomedicine included the development of nanoparticles for diagnostic and screening purposes. It has powerful impact in various medical fields such as Clinical dioagnosis, molecular biology. In future many novel nanoparticles and nanodevices are expected to be used, with an enormous positive impact on human health. Our major role is to improve health by enhancing the efficacy and safety of nanosystems and nanodevices for improving health of people and diagnostic, screening and drug delivery purposes, viral detection, effective and safer treatment of various diseases on individual atoms, molecules, or compounds into structures produce materials and devices with special properties.

National Assignment

1. 미세플라스틱의 위해성 평가, 과학기술정보통신부, (2020~2023)
2. 고분산성 CNF를 이용한 친환경 복합재료 및 자동차용 내장 부품 개발, 산업통상자원부, (2020~2023)
3. 인열강도가 향상된 PLA 기반 생분해성 필름 소재 개발, (2018~2021)
4. 진단 시약용 다색성 Sub-micron 고분자 Probe 개발, 과학기술정보통신부, (2016)
5. 응급실 환경에서의 HIV 감염성 질환의 멀티분석 디바이스 및 정량적 모니터링 시스템 개발, 산업통상자원부, (2013~2016)

Research Publication

1. SW Park and JS Hwang, et al. "Effect of solvent and blended polymer on electrical conductivity of PEDOT: PSS/polymer blended nanofibers." *Fibers and Polymers* 17.8 (2016): 1171-1174.
2. JY Lee and JS Hwang, et al. "Preparation of monodisperse poly (vinyl alcohol)(PVA) nanoparticles by dispersion polymerization and heterogeneous surface saponification." *Fibers and Polymers* 17.4 (2016): 502-511.
3. JS Hwang, et al. "Effect of solvent on electrical conductivity and gas sensitivity of PEDOT: PSS polymer composite films." *Journal of Applied Polymer Science* 132.40 (2015).

Patents

1. 진단 시약용 셀룰로오스 아세테이트 착색 미립자 비드의 염색성 향상을 위한 표면 개질 방법, 등록:10-1815920, (2018)