

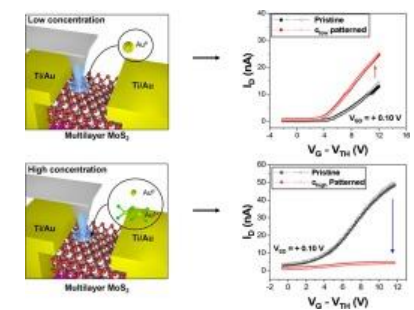
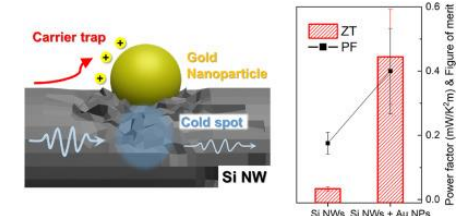
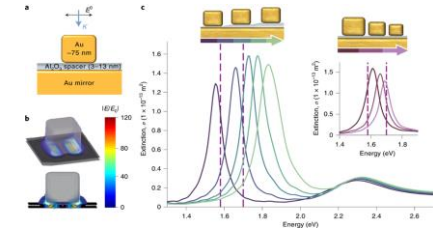
- 동국대 물리반도체과학부 나노공정 및 나노물성 연구실
(<https://advnanolitho.wixsite.com/advnanolitho>)에서 “반도체인력양성사업단
반도체 전공트랙 사업” 을 수행하기 위한 학부 연구생을 모집하고 있습니다.
- 총 연구 기간: 2022.07 ~ 2025.02 (당해 년도: 2022.07 ~ 2023.02)
- 참여 대상: 본교 대학원 진학을 희망하는 학부 학생
- 선정 학부연구생에게는 장학금 (월 40만원)이 지원 될 예정입니다
- 본 연구실은 해당연구 분야의 전문지식 및 국제화 감각을 지닌 전문가로의 성장을
목표로 지도를 수행하고 있습니다.
- 연구에 대한 호기심과 열정이 있는 학생은 누구나 환영합니다!!
- 자세한 문의는 장재원 교수 (010-9030-4503, jwjang@dgu.ac.kr) 에게 해주기
바랍니다!!.

■ 주요 연구 주제

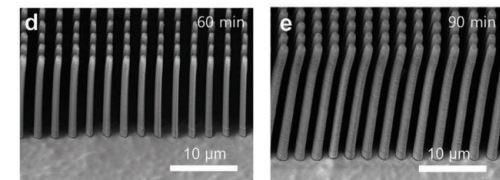
- 나노공정 활용 기능성 반도체 소재 개발 연구
- 나노공정 활용 반도체 응용 소자 (광-전기, 에너지, 환경)
- 나노구조 금속/반도체 접합의 플라즈몬 연관 물성 메커니즘 연구
- 독창적 나노공정 기술 (탐침기반리소그래피) 연구

연구실 대표논문 나노 공정 및 물성연구실 소속 **bold** 표기

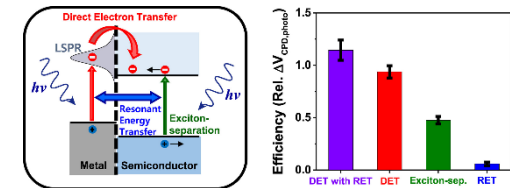
1. **D. W. Kim, J.-W. Jang***: Plasmonic nanocavity as a spectroscopic probe for molecules, **Matter** (2022) in press. **(Impact factor: 19.967)**
2. **G. W. Jeon, S.-H. Lee, J.-S. Jo, W. Huang, T. Fujigaya, and J.-W. Jang***: Enhanced thermoelectric performance of vertically aligned silicon nanowires through the cold spot effect and charge carrier trapping effect of attached gold nanoparticles, **Materials Today Energy**, (2022) In press. **(Impact factor: 9.275)**
3. **K.H. Park, J.-S. Jo, J. Choi, M. J. Kim, K.-B. Chung, Y. K. Hong, D. H. Park, and J. W. Jang***: Electron donor or acceptor behavior of a AuCl₃ dopant manipulated by dip-pen nanolithography on a MoS₂ thin-film transistor, **Applied Surface Science**, 588 (2022) 152846. **(Impact factor: 7.392)**



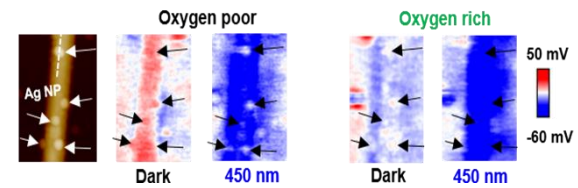
4. **J. S. Jo, J. Choi, S. H. Lee, C. Song, H Noh, and J.-W. Jang***: Mass Fabrication of 3D Silicon ano-/Microstructures by Fab-Free Process Using Tip-Based Lithography, *Small* 17 (2021) 2005036 (Impact factor: 15.153)



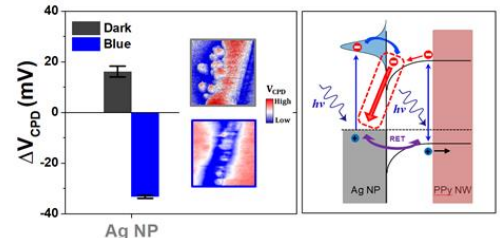
5. **S.-H. Lee, S. W. Lee, T. Jeon, D. H. Park, S. C. Jung, and J.-W. Jang***: Efficient Direct Electron Transfer via Band Alignment in Hybrid Metal-Semiconductor Nanostructures Toward Enhanced Photocatalysts, *Nano Energy*, 63 (2019) 103841. (Impact factor: 19.069)



6. **S.-H. Lee, J.-S. Jo, J. H. Park, S. W. Lee, and J. W. Jang***: A hot-electron-triggered catalytic oxidation reaction of plasmonic silver nanoparticles evidenced by surface potential mapping, *Journal of Materials Chemistry A*, 6 (2018) 20939–20946. (Impact factor: 14.511)



7. **S.-H. Lee, S. W. Lee, T. Oh, S. H. Petrosko, C. A. Mirkin, and J.-W. Jang***: Direct Observation of Plasmon-Induced Interfacial Charge Separation in Metal/Semiconductor Hybrid Nanostructures by Measuring Surface Potentials, *Nano Letters*, 18 (2018) 109-116. (Impact factor: 12.262)



8. **S.-H. Lee, S. Hwang, and J.-W. Jang***: Giant Temperature Coefficient of Resistivity and Cryogenic Sensitivity in Silicon with Galvanically Displaced Gold Nanoparticles in Freeze-Out Region, *ACS Nano*, 11 (2017) 1572-1580. (Impact factor: 18.027)

