

Sangjun Han

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EDUCATION

Korea Advanced Institute of Science and Technology (KAIST) <i>Doctor of Electrical Engineering</i>	Daejeon, South Korea <i>Mar. 2020 – Present</i>
Korea Advanced Institute of Science and Technology (KAIST) <i>Master of Electrical Engineering</i>	Daejeon, South Korea <i>Mar. 2018 – Feb. 2020</i>
Korea Advanced Institute of Science and Technology (KAIST) <i>Bachelor of Physics</i>	Daejeon, South Korea <i>Mar. 2013 – Feb. 2018</i>

PUBLICATIONS

- Han, S., Kim, S., Kim, S., Low, T., Brar, V. W., and Jang, M. S. (2020). "Complete complex amplitude modulation with electronically tunable graphene plasmonic metamolecules." **ACS Nano**, 14(1), 1166-1175.
- Han, H. J., Cho, S. H., Han, S., Jang, J-S, Lee, G. R., Cho, E. N., Kim, S-J, Kim, I-D, Jang, M. S., Tuller, H. L., Cha, J. J., and Jung, Y. S. (2021). "Synergistic integration of chemo-resistive and SERS sensing for label-free multiplex gas detection." **Advanced Materials**, 2105199.

CONFERENCE PRESENTATIONS

- Han, S., Ha, H., and Jang, M. S., "Electrical tuning of complex reflectivity with graphene-based metasurface," **The 9th International Conference on Surface Plasmon Photonics**, Copenhagen, Denmark, May 2019
- Han, S., Kim, J., Kim, J. Y., Park, J., and Jang, M. S., "Electronical Tuning of Complex Reflectivity with Graphene-based Metasurface," **2019 MRS Fall Meeting & Exhibit**, Boston, USA, Dec 2019
- Han, S., Cha, J., Kim, S., Kim, S., Low, T., Brar, V. W., and Jang, M. S., "Complete complex amplitude modulation with graphene plasmonic active metamolecules," **SPIE Nanoscience + Engineering 2020**, Online, Aug 2020

PATENTS

- Korean Patent Application 10-2019-0047778 / Date: 2019.04.24 / Title: "광소자 및 그의 제조방법" / Inventors: Jang, Min Seok, Han, Sangjun, Kim, Shinho
- US Patent Application US 16686478 / Date: 2019.11.18 / Title: "Optical Device And Method For Manufacturing The Same" / Inventors: Jang, Min Seok, Han, Sangjun, Kim, Shinho
- Chinese Patent Application CN 201911127858.3 / Date: 2019.11.18 / Title: "光器件及其制作方法" / Inventors: Jang, Min Seok, Han, Sangjun, Kim, Shinho
- PCT Patent Application PCT/KR2019/016396 / Date: 2019.11.26 / Title: "광소자 및 그의 제조방법" / Inventors: Jang, Min Seok, Han, Sangjun, Kim, Shinho

ADDITIONAL SKILLS

Measurement: Optical set-up (Interferometer), Quantum cascade laser (QCL; MIRCAt-QT), Fourier transform infrared spectroscopy (FTIR), Atomic force microscopy (AFM), Scattering Scanning Near-field Optical Microscopy (s-SNOM)

Software: Lumerical FDTD, COMSOL Multiphysics, Rigorous Coupled Wave Analysis (RCWA), optimization with BOBYQA, LabVIEW

Languages: English (advanced), Korean (native).

Programming languages: MATLAB, Python, Wolfram Mathematica