[CURRICULUM VITAE]

GIL JU LEE

Assistant Professor
School of Electrical and Electronics Engineering (EEE), Pusan National University (PNU), 2, Busandaehak-ro 63beon-gil, Geumjeong-gu, Busan, Republic of Korea 46241
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RESEARCH INTERESTS

Novel photonic devices and advanced optoelectronics including zero-energy radiative cooler, multi-functional nanophotonic devices, wearable devices, and next-generation imaging devices

- Passive radiative coolers for aesthetic purposes and enclosed space
- Bio-inspired imaging systems for next-generation cameras inspired by animal eyes
- Optical physical unclonable functions with compact configurations
- Semiconductor nanowires for optical filter, coloration, and artificial photoreceptors

EDUCATION

Integrated M.S/Ph.D. Degree	***GIST Presidential Fellowship*** **Gwangju Institute of Science and Technology (GIST), Korea** School of Electrical Engineering and Computer Science, Sept. 2016~ Feb. 2021 Advisor: Prof. Young Min Song
B.S. Degree	***Summa Cum Laude*** **Pusan National University, Korea** Department of Electronics Engineering, Mar. 2009~ Feb. 2016

WORK EXPERIENCES

Assistant Professor (2021 – Present), EEE, PNU, Republic of Korea

Postdoctoral research associate (Mar. 2021 – Aug. 2021), School of Electrical Engineering and Computer Science, GIST, Korea
Advisor: Prof. Young Min Song

AWARDS AND FELLOWSHIPS

Outstanding Researcher Award, Pusan National University, Korea (2022, 2023, 2024)

Haerim Prof. Un-Chul Paek award, GIST, Korea (19 February, 2021)

Golden Prize (Physical Devices & Processes), the 27th Samsung HumanTech Thesis Award, Samsung Electronics, Korea (2021)

Encouragement Award (Material Science & Engineering), the 27th Samsung HumanTech Thesis Award, Samsung Electronics, Korea (2021)

2020 Research Assistant Contests, GIST, Korea (16 December, 2020)

Robert S. Hilbert Memorial Student Travel Grant, 2020 FiO by OSA (2020)

2019 Research Assistant Contests, GIST, Korea (16 December, 2019)

Gold medal prize of 2018 Research Assistant Contests, GIST, Korea (13 December 2018)

The best poster awards (2nd place) in the 5th International Conference on Electronic Materials and Nanotechnology (ENGE) for Green environment 2018, Jeju-island, Korea, November 2018
Title: "Heat reduction in wearable devices by integrating radiative photonic structure and thin metal film", **G. J. Lee**, S.-Y. Heo, and Y. M Song

Gold medal prize of 2017 Research Assistant Contests, GIST, Korea (22 December 2017)

IT Research Paper Award in Qualcomm-GIST Innovation Award (2016)
Title: "Design of multi-band filters by stacking polymer-embedded vertical silicon nanowires"

President's scholarship in Gwangju Institute of Science and Technology (GIST) (Sep. 2016 – Aug. 2019).

FUNDINGS

한우물파기 기초연구, 연구책임자, 한국연구재단, 수행중 (April 2024 – March 2034)
(연 187,600,000원)

기초연구실 지원사업, 공동연구자, 한국연구재단, 수행중 (July 2023 – Feb. 2026)
(연 500,000,000원)

세종과학펠로우십, 연구책임자, 한국연구재단, 수행중 (Mar. 2021 – Feb. 2026)
(연 120,000,000원)

ICT R&D혁신 바우처 지원사업, 공동연구자, 정보통신기획평가원, 지원종료
(April 2023 – June 2024) (총 400,000,000원)

Global Ph. D Fellowship, 연구책임자, 한국연구재단, 지원종료 (Mar. 2017 – Feb. 2021)
(연 20,000,000원)

FEATURED ARTICLES

†: Co-first author
***: Corresponding author**

1. M. Kim†, S. Chang†, M. Kim†, J.-E. Yeo, M. S. Kim, **G. J. Lee***, D.-H. Kim*, and Y. M. Song*, "Cuttlefish eye–inspired artificial vision for high-quality imaging under uneven illumination conditions", ***Sci. Robot.*** 8, 75, ade4698 (2023). (IF: 27.541)
(IF = 27.541, Top 2% in *Robotics*)
Specific roles: Conceptualization, imaging system design, fabrication of flexible polarization filters, proposal for self-driving applications, experiment design

2. S.-Y. Heo, D. H. Kim, Y. M. Song*, and **G. J. Lee***, "Determining the effectiveness of radiative cooler-integrated solar cells", ***Adv. Energy Mater.*** 2103258 (2021).
[Inside cover Article]
(IF = 29.698, Top 4% in *Energy&Fuels*)
Specific roles: Conceptualization, theoretical analysis on the efficiency improvement of III-V photovoltaic cells by radiative coolers, proposal for device integration methods, experiment design, , demonstration

3. M. Cho†, J.-K. Han†, J. Suh†, J. J. Kim, J. R. Ryu, I. S. Min, M. Sang, S. Lim, T. S. Kim, K. Kim, K. Kang, K. Hwang, K. Kim, E.-B. Hong, M.-H. Nam, J. Kim, Y. M. Song, **G. J. Lee***, I.-J. Cho*, and K. J. Yu*, "Fully bioresorbable hybrid opto-electronic neural implant system for simultaneous electrophysiological recording and optogenetic stimulation", ***Nat. Commun.*** 15, 2000 (2024).
(IF = 14.7, Top 10% in *Multidisciplinary*)
Specific roles: Optical waveguide analyses, structural optimization on waveguide, measurement setup design, optical simulations on the effects of surface materials (Mo, Ag, Si, etc)

4. M. Lee†, **G. J. Lee**†, H. J. Jang†, E. Joh, H. Cho, M. S. Kim, H. M. Kim, K. M. Kang, J. H. Lee, M. Kim, H. Jang, J.-E. Yeo, F. Durand, N. Lu, D.-H. Kim*, and Y. M. Song*, "An amphibious artificial vision system with a panoramic visual field", ***Nat. Electronics*** 5, 452-459 (2022).
[Cover picture article]
(IF = 33.255, Top 1% in *Engineering, Electrical & Electronic*)
Specific roles: Theoretical analyses on the effects of graded index microlenses, flat-top microlens array design and fabrication, experiment setup design and establishment, measurement, and demonstration

5. M. S. Kim†, **G. J. Lee**†, C. Choi†, M. S. Kim†, M. Lee, S. Liu, K. W. Cho, H. M. Kim, M. K. Choi, N. Lu, Y. M. Song*, and D.-H. Kim*, "An aquatic-vision-inspired camera using a monocentric lens and a silicon nanorod photodiode array", ***Nat. Electronics*** 3, 546-553 (2020).
(IF = 33.255, Top 1% in *Engineering, Electrical & Electronic*)
Specific roles: Theoretical analyses on the effects of surrounding materials, monocentric lens design and fabrication, experiment setup design and establishment, measurement of the performance of the monocentric lens and Si photodiode array, demonstration of wide field-of-view imaging and dim environment imaging

PUBLICATIONS

†: Co-first author
***: Corresponding author**

67. M. S. Kim†, M. S. Kim†, M. Lee†, H. J. Jang, D. H. Kim, S. Chang, M. Kim, H. Cho, J. Kang, C. Choi, J. P. Hong, D. K. Hwang, **G. J. Lee***, D.-H. Kim*, and Y. M. Song* "Feline eye–inspired artificial vision for enhanced camouflage breaking under diverse light conditions", ***Sci. Adv.*** 10, 38, adp2809 (2024). **(JCR < 10%)**

66. M. J. Hong†, M. J. Kim†, S. B. Lee, Y. M. Song*, and **G. J. Lee***, "Nanowire-based artificial photoreceptors with multi-hyperuniformity inspired by chicken retina", ***Opt. Express*** 32, 20, 35331-35344 (2024).

65. D. G. Ryu†, J. T. Kim†, M. S. Kim, J. J. Kim, H. J. Nam, I. H. Jeong, Y. J. Kim, and **G. J. Lee***, "Angular selective broadband radiative cooling based on Berreman mode", ***Opt. Express*** 32, 19, 33016-33028 (2024).

64. C. Choi, H. Hinton, H. Seung, S. Chang, J. S. Kim, W. You, M. S. Kim, J. P. Hong, J. A. Lim, D. K. Hwang, **G. J. Lee**, H. J., Y. M. Song*, D.-H. Kim*, D. Ham*, "Anti-distortion bioinspired camera with an inhomogeneous photo-pixel array", ***Nat. Commun.,*** 15, 6021 (2024). **(JCR < 10%)**

63. J. Park†, M. S. Kim†, J. Kim†, S. Chang, M. Lee, **G. J. Lee**, Y. M. Song*, and D.-H. Kim*, "Avian eye–inspired perovskite artificial vision system for foveated and multispectral imaging", ***Sci. Robot.***, 9, 90, eadk6903 (2024). (JCR < 3%)

62. J. T. Kim†, S. K. Jeon†, M. S. Kim, D. H. Yeo, S. Nahm, Y. J. Kim*, and **G. J. Lee***, "Enhanced color-preserving radiative coolers for versatile architectural applications", ***Adv. Opt. Mater.,*** 12, 18, 2400144 (2024). (JCR < 10%)

61. M. J. Kim†, J. T. Kim, M. J. Hong, S. W. Park, and **G. J. Lee***, "Deep learning-assisted inverse design of nanoparticle-embedded radiative coolers", ***Opt. Express*** 32, 9, 16235-16247 (2024).

60. D. H. Kim†, J. J. Kim†, D.-J. Kong, **G. J. Lee***, and Y. M. Song*, "Bio-inspired tunable optics and photonics: bridging the gap between nature and technology", ***Int. J. Optomechatronics*** 18, 1, 2334293 (2024).

59. M. Cho†, J.-K. Han†, J. Suh†, J. J. Kim, J. R. Ryu, I. S. Min, M. Sang, S. Lim, T. S. Kim, K. Kim, K. Kang, K. Hwang, K. Kim, E.-B. Hong, M.-H. Nam, J. Kim, Y. M. Song, **G. J. Lee***, I.-J. Cho*, and K. J. Yu*, "Fully bioresorbable hybrid opto-electronic neural implant system for simultaneous electrophysiological recording and optogenetic stimulation", ***Nat. Commun.*** 15, 2000 (2024). (JCR < 10%)

58. C. Choi†, **G. J. Lee**†, S. Chang†, Y. M. Song*, and D.-H. Kim*, "Nanomaterial-Based Artificial Vision Systems: From Bioinspired Electronic Eyes to In-Sensor Processing Devices", ***ACS Nano*** 18, 2, 1241-1256 (2024). (JCR <10%)

57. M. S. Kim†, M. H. Kang†, J. S. Kim, Y. K. Hong*, and **G. J. Lee*** "Flexible and Wearable Encryption Primitive Based on Optically Unclonable Functions", ***IEEE J. Sel. Top. Quantum Electron.*** 30, 3 (2023).

56. I. H. Jeong†, S. W. Park†, M. S. Kim, J. T. Kim, and **G. J. Lee***, "Parabolic Mirror-Assisted Thermoelectric and Radiative Cooling System for Maximizing Power Generation Utilizing Solar and Outer Space Thermodynamic Resources", ***Adv. Mater. Interfaces*** 10, 22, 2300573 (2023).

55. S. K. Jeon†, J. T. Kim†, M. S. Kim, I. S. Kim, S. J. Park, H. Jeong*, **G. J. Lee***, and Y. J. Kim*, "Scalable, Patternable Glass-Infiltrated Ceramic Radiative Coolers for Energy-Saving Architectural Applications", ***Adv. Sci.*** 10, 27, 2302701 (2023).
(IF = 15.1, Top 7% in *Materials Science, Multidisciplinary*)

54. D. H. Kim S.-Y. Heo, Y.-W. Oh, S. Jung, M. H. Kang, I.-S. Kang*, **G. J. Lee***, and Y. M. Song*, "Polarization-mediated multi-state infrared system for fine temperature regulation", ***APL Photonics*** 8, 030801 (2023).
[Featured article], [SCI light]
(IF = 6.382, Top 15% in *Optics*)

53. M. Kim†, S. Chang†, M. Kim†, J.-E. Yeo, M. S. Kim, **G. J. Lee***, D.-H. Kim*, and Y. M. Song*, "Cuttlefish eye–inspired artificial vision for high-quality imaging under uneven illumination conditions", ***Sci. Robot.*** 8, 75, ade4698 (2023). (IF: 27.541)
(IF = 27.541, Top 2% in *Robotics*)

52. W. B. Han†, S.-Y. Heo†, D. Kim†, S. M. Yang, G.-J. Ko, **G. J. Lee**, D.-J. Kim, K. Rajaram, J. H. Lee, J.-W. Shin, T.-M. Jang, S. Han, H. Kang, J. H. Lim, D. H. Kim, S. H. Kim, Y. M. Song, and S.-W. Hwang, "Zebra-inspired stretchable, biodegradable radiation modulator for all-day sustainable energy harvesters", ***Sci. Adv.*** 9, 5, adf5883 (2023). (IF: 14.980)
(IF = 14.980, Top 9% in *Multidisciplinary*)

51. M. S. Kim and **G. J. Lee***, "Visually Hidden, Self-Assembled Porous Polymers for Optical Physically Unclonable Functions", ***ACS Appl. Mater. Interfaces*** (2023). (IF: 10.383)
(IF = 10.383, Top 15% in *Materials Science, multidisciplinary*)

50. Y. M. Song, C. Yu, and **G. J. Lee***, "Special Section Guest Editorial: Biomimetic Optical Microsystems", ***J. Opt. Microsyst.*** (2022).

49. D. H. Kim, **G. J. Lee***, and Y. M. Song*, "Compact zooming optical systems for panoramic and telescopic applications based on curved image sensor", ***J. Opt. Microsyst.*** 2(3) (2022).

48. M. Lee†, **G. J. Lee**†, H. J. Jang†, E. Joh, H. Cho, M. S. Kim, H. M. Kim, K. M. Kang, J. H. Lee, M. Kim, H. Jang, J.-E. Yeo, F. Durand, N. Lu, D.-H. Kim*, and Y. M. Song*, "An amphibious artificial vision system with a panoramic visual field", ***Nat. Electronics*** 5, 452-459 (2022).
[Cover picture article]
(IF = 33.255, Top 1% in *Engineering, Electrical & Electronic*)

47. S.-Y. Heo, **G. J. Lee***, and Y. M. Song*, "Heat-shedding with photonic structures: radiative cooling and its potential", ***J. Mater. Chem. C*** 10, 9915-9937 (2022).
(IF = 8.067, Top 15% in *Physics, Applied*)

46. S.-H. Byun, J. H. Yun, S.-Y. Heo, C. Shi, **G. J. Lee**, K.-C. Agno, K.-I. Jang, J. Xiao, Y. M. Song, J.-W. Jeong, "Self-Cooling Gallium-Based Transformative Electronics with a Radiative Cooler for Reliable Stiffness Tuning in Outdoor Use", ***Adv. Sci.*** 9, 24, 2202549 (2022).
[Cover picture article]
(IF = 17.521, Top 6% in *Materials Science, Multidisciplinary*)

45. Y. J. Yoo, J. H. Ko, **G. J. Lee**, J. Kang, M. S. Kim, S. G. Stanciu, H.-H. Jeong, D.-H. Kim*, Y. M. Song*, "Gires–Tournois Immunoassay Platform for Label-Free Bright-Field Imaging and Facile Quantification of Bioparticles", ***Adv. Mater.*** 34, 21, 2110003 (2022).
[Cover picture article]
(IF = 32.086, Top 3% in *Materials Science, Multidisciplinary*)

44. D. H. Seo, S.-Y. Heo, D. H. Kim, Y. M. Song*, and **G. J. Lee***, "Spatially-segmented colored radiative cooler with angle-robustness", ***IEEE Photonics J.*** 14, 2 (2022).
(IF = 2.252, Top 60% in *Optics*)

43. M. S. Kim†, **G. J. Lee**†, J. W. Leem, S. Choi, Y. L. Kim*, and Y. M. Song*, "Revisiting silk: a lens-free optical physical unclonable function", ***Nat. Commun.*** 13, 247 (2022).
(IF = 17.694, Top 8% in *Multidisciplinary Sciences*)

42. S. H. Kim, J. H. Ko, Y. J. Yoo, M. S. Kim, **G. J. Lee**, S. Ishiii, and Y. M. Song*, "Single-Material, Near-Infrared Selective Absorber Based on Refractive Index-Tunable Tamm Plasmon Structure", ***Adv. Opt. Mater.*** 2102388 (2022).
(IF = 10.050, Top 9% in *Optics*)

41. S.-Y. Heo, D. H. Kim, Y. M. Song*, and **G. J. Lee***, "Determining the effectiveness of radiative cooler-integrated solar cells", ***Adv. Energy Mater.*** 2103258 (2021).
[Inside cover Article]
(IF = 29.698, Top 4% in *Energy&Fuels*)

40. D. H. Kim†, **G. J. Lee**†, S.-Y. Heo, S. Son, K. M. Kang, H. Lee, and Y. M. Song*, "Ultra-thin and near-unity selective emitter for efficient cooling", ***Opt. Express*** 20, 27 (2021).
(IF = 3.833, Top 30% in *Optics*)

39. S. K. Heo, J. Ha, S. J. Son, I. S. Choi, H. Lee, S. Oh, J. Jekal, M. H. Kang, **G. J. Lee**, H. H. Jung, J. Yea, T. Lee, Y. Lee, J.-W. Choi, S. Xu, J. H. Choi, J.-W. Jeong, Y. M. Song, J.-C. Rah*, H. Keum*, and K.-I. Jang*, "Instant, multi-scale dry transfer printing by atomic diffusion control at heterogeneous interfaces", ***Sci. Adv.*** 7, eabh0040 (2021).
(IF = 14.972, Top 9% in *Multidisciplinary Sciences*)

38. Z. F. Mira, S.-Y. Heo, D. H. Kim, **G. J. Lee**, and Y. M. Song*, "Multilayer selective passive daytime radiative cooler optimization utilizing memetic algorithm", ***J. Quant. Spectrosc. Radiat. Transfer.*** 272, 107774 (2021).
(IF = 2.342, Top 60% in *Optics*)

37. M. S. Kim, M. S. Kim, **G. J. Lee**, S.-H. Sunwoo, S. Chang, Y. M. Song*, and D.-H. Kim*, "Bio-inspired artificial vision and neuromorphic image processing devices", ***Adv. Mater. Technol.*** 2100144 (2021).
(IF = 8.856, Top 18% in *Materials Science, Multidisciplinary*)

36. J. H. Lee, Y. J. Kim, Y. J. Yoo, S. Chang, **G. J. Lee**, J. H. Ko, K. M. Kang, D. Chanda, and Y. M. Song*, "Colored, covert infrared display through hybrid planar-plasmonic cavities", ***Adv. Opt. Mater.*** 2100429 (2021).
(IF = 10.050, Top 9% in *Optics*)

35. D. H. Kim†, **G. J. Lee**†, S.-Y. Heo, I.-S. Kang*, and Y. M. Song*, "Thermostat property of Janus emitter in enclosures", ***Sol. Energy Mater. Sol. Cells***, 230, 111173 (2021).
(IF = 7.305, Top 30% in *Energy&Fuels*)

34. Y. Lee†, T. Kang†, H. R. Cho†, **G. J. Lee**†, O. K. Park, S. Kim, B. Lee, H. M. Kim, G. D. Cha, Y. Shin, W. Lee, M. Kim, H. Kim, Y. M. Song*, S. H. Choi*, T. Hyeon*, D.-H. Kim*, "Localized delivery of theranostic nanoparticles and high-energy photons using microneedles-on-bioelectronics", ***Adv. Mater.*** 2100425 (2021).
(IF = 32.086, Top 3% in *Materials Science, Multidisciplinary*)

33. M. H. Kang†, **G. J. Lee**†, J. H. Lee, M. S. Kim, Z. Yan, J.-W. Jeong, K.-I. Jang, and Y. M. Song*, "Outdoor-useable, Wireless/Battery-free Patch-type Tissue Oximeter with Nano-/Micro-voids Polymer", ***Adv. Sci.*** 2004885 (2021).
(IF = 17.521, Top 6% in *Materials Science, Multidisciplinary*)
[Back cover Article]

32. M. H. Kang†, **G. J. Lee**†, J. H. Yun, and Y. M. Song*, "NFC-based Wearable Optoelectronics Working with Smartphone Application for Untact Healthcare", ***Sensors***, 21, 878 (2021).
(IF = 3.847, Top 35% in *Engineering, Electrical & Electronic*)

31. C. Choi, J. Leem, M. S. Kim, A. Taqieddin, C. Cho, K. W. Cho, **G. J. Lee**, H. Seong, H. J. Bae, Y. M. Song, T. Hyeon, N. Aluru, S. Nam, and D.-H. Kim, "Curved neuromorphic image sensor array using a MoS2-organic heterostructure inspired by the human visual recognition system", ***Nat. Commun.*** 11, 5934 (2020).
(IF = 17.694, Top 8% in *Multidisciplinary Sciences*)

30. **G. J. Lee**, D. H. Kim, S.-Y. Heo, and Y. M. Song*, "Spectrally and spatially selective emitters using polymer hybrid spoof plasmonics", ***ACS Appl. Mater. Interfaces*** 12, 53206-53214 (2020).
(IF = 10.383, Top 15% in *Materials Science, Multidisciplinary*)

29. S.-Y. Heo†, **G. J. Lee**†, D. H. Kim, Y. J. Kim, S. Ishii, M. S. Kim, T. J. Seok, B. J. Lee, H. Lee, and Y. M. Song*, "A Janus emitter for passive heat release from enclosures", ***Sci. Adv.*** 6, 36, eabb1906 (2020).
(IF = 14.972, Top 9% in *Multidisciplinary Sciences*)

28. S. Chang, **G. J. Lee**, and Y. M. Song*, "Recent Advances in Vertically Aligned Nanowires for Photonics Applications", ***Micromachines*** 11, 726 (2020).
(IF = 3.523, Top 35% in *Instruments&Instrumentation*)

27. M. S. Kim†, **G. J. Lee**†, C. Choi†, M. S. Kim†, M. Lee, S. Liu, K. W. Cho, H. M. Kim, M. K. Choi, N. Lu, Y. M. Song*, and D.-H. Kim*, "An aquatic-vision-inspired camera using a monocentric lens and a silicon nanorod photodiode array", ***Nat. Electronics*** 3, 546-553 (2020).
(IF = 33.255, Top 1% in *Engineering, Electrical & Electronic*)

26. **G. J. Lee**, K. Park, M. S. Kim, S. Chang, T. J. Seok, H.-G. Park, G. Ju, K. Kim, and Y. M. Song*, "Selective and sensitive photon sieve based on III-V semiconductor nanowire forest fabricated by lithography-free process", ***Adv. Opt. Mater.*** 8, 17 (2020).
(IF = 10.050, Top 9% in *Optics*)
[Back cover Article]

25. H. M. Kim, M. S. Kim, **G. J. Lee**, H. J. Jang, and Y. M. Song*, "Miniaturized 3D Depth Sensing-Based Smartphone Light Field Camera", ***Sensors*** 20, 2129 (2020).
(IF = 3.847, Top 35% in *Engineering, Electrical & Electronic*)

24. **G. J. Lee**, H. M. Kim, and Y. M. Song*, "Design and Fabrication of Microscale, Thin-film Silicon Solid Immersion Lenses for Mid-Infrared Application", ***Micromachines*** 11, 250 (2020).
(IF = 3.523, Top 35% in *Instruments&Instrumentation*)

23. **G. J. Lee**, Y. J. Kim, H. S. Song, D. E. Yoo, D.-W. Lee, I.-S. Kang, and Y. M. Song*, "The Facile Implementation of Soft/Tunable Multiband Optical Filters by Stacking Vertical Silicon Nanowire Arrays for Smart Sensing", ***Adv. Intell. Syst.*** 1900072 (2019).
(IF = 7.298, Top 15% in *Robotics*)

22. H. J. Jang, Y. J. Kim, Y. J. Yoo, **G. J. Lee**, M.S. Kim, K. S. Chang, and Y. M. Song*, "Double-Sided Anti-Reflection Nanostructures on Optical Convex Lenses for Imaging Applications", ***Coatings*** 9, 404 (2019).
(IF = 3.236, Top 45% in *Materials Science, Coatings&Films*)

21. V. Siva, K. W. Park, M. S. Kim, Y. J. Kim, **G. J. Lee**, M. J. Kim and Y. M. Song*, "Mapping the Structural, Electrical, and Optical Properties of Hydrothermally Grown Phosphorus-doped ZnO Nanorods for Optoelectronic Device Applications", ***Nanoscale Res. Lett.*** 14, 110 (2019).
(IF = 5.418, Top 25% in *Physics, Applied*)

20. Y. J. Kim, Y. J. Yoo, **G. J. Lee**, D. E. Yoo, D. W. Lee, V. Siva, H. S. Song, I. S. Kang, and Y. M. Song*, "Enlarged Color Gamut Representation Enabled by Transferable Silicon Nanowire Arrays on Metal−Insulator−Metal Films", ***ACS Appl. Mater. Interfaces*** 11, 11849 (2019).
(IF = 10.383, Top 15% in *Materials Science, Multidisciplinary*)

19. H. S. Song†, **G. J. Lee**†, D. E. Yoo, Y. J. Kim, Y. J. Yoo, D. W. Lee, V. Siva, I. S. Kang and Y. M. Song*, "Reflective color filter with precise control of the color coordinate achieved by stacking silicon nanowire arrays onto ultrathin optical coatings", ***Sci. Reports*** 9, 3350 (2019).
(IF = 4.996, Top 25% in *Multidisciplinary Sciences*)

18. H. M. Kim†, M. S. Kim†, **G. J. Lee**†, Y. J. Yoo and Y. M. Song*, "Large area fabrication of engineered microlens array with low sag height for light-field imaging", ***Opt. Express*** 27, 4 (2019).
(IF = 3.833, Top 30% in *Optics*)

17. **G. J. Lee**, Y. J. Kim, H. M. Kim, Y. J. Yoo, Y. M. Song*, "Colored, Daytime Radiative Coolers with Thin-Film Resonators for Aesthetic Purposes", ***Adv. Opt. Mater.*** 1800707 (2018).
(IF = 10.050, Top 9% in *Optics*)
[Cover Picture Article]
[Selected as Top 10 Nanotechnology in 2019]

16. Y. J. Kim, **G. J. Lee**, S. K. Kim, J. W. Min, S. Y. Jeong, Y. J. Yoo, S. H. Lee, Y. M. Song*, "Efficient Light Absorption by GaN Truncated Nanocones for High Performance Water Splitting Applications" ***ACS Appl. Mater. Interfaces*** 10, 28672 (2018).
(IF = 10.383, Top 15% in *Materials Science, Multidisciplinary*)

15. K. J. Ko, H. B. Lee, H. M. Kim, **G. J. Lee**, S. R. Shin, N. Kumar, Y. M. Song, J. W. Kang*, "High-performance, color-tunable fiber shaped organic light-emitting diodes", ***Nanoscale*** 10, 16184 (2018).
(IF = 8.307, Top 15% in *Physics, Applied*)

14. H. M. Kim†, **G. J. Lee**†, M. S. Kim, and Y. M. Song*, "Fabrication of Flexible Image Sensor Based on Lateral NIPIN Phototransistors", ***J. Vis. Exp.*** 136, e57502 (2018).
(IF = 1.424, Top 70% in *Multidisciplinary Sciences*)

13. S. Y. Jeong, H. M. Shin, Y. R. Jo, Y. J. Kim, S.K. Kim, W. J. Lee, **G. J. Lee**, J. S. Song, B. J. Moon, S. H. Seo, H. J. An, S. H. Lee, Y. M. Song, B. J. Kim, M. H. Yoon, and S. H. Lee*, "Plasmonic Silver Nanoparticle-Impregnated Nanocomposite BiVO4 Photoanode for Plasmon-Enhanced Photocatalytic Water Splitting", ***J. Phys. Chem. C.*** 122, 7088 (2018).
(IF = 4.177, Top 50% in *Chemistry, Physical*)

12. **G. J. Lee**, C. S. Choi, D.-H. Kim*, Y. M. Song*, "Bioinspired Artificial Eyes: Optic Components, Digital Cameras, and Visual Prostheses", ***Adv. Funct. Mater.*** 2018, 1705202 (2018).
(IF = 19.924, Top 5% in *Materials Science, Multidisciplinary*)
[Back cover Article]

11. C. Choi, M. K. Choi, S. Liu, M. S. Kim, C. Im, O. K. Park, J. Kim, **G. J. Lee**, K. W. Cho, M. Kim, E. Joh, J. Lee, D. Son, S.-H. Kwon, N. L. Jeon, Y. M. Song, N. Lu, and D.-H. Kim, "Human eye-inspired soft optoelectronic device using high-density MoS2-graphene curved image sensor array", ***Nat. Commun.*** 8, 15894 (2017).
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10. H. S. Song, Y. J. Yoo, **G. J. Lee**, K. S. Chang, Y. M. Song, "Optical Design of Porous ZnO/TiO2 Films for Highly Transparent Glasses with Broadband Ultraviolet Protection", ***J. Nanomater.*** 2738015, 8 (2017).
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8. M. S. Kim†, **G. J. Lee**†, H. M. Kim, Y. M. Song, "Parametric Optimization of Lateral NIPIN Phototransistors for Flexible Image sensors", ***Sensors*** 17, 1774 (2017).
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6. **G. J. Lee**, W. I. Nam, and Y. M. Song, "Robustness of an artificially tailored fisheye imaging system with a curvilinear image surface", ***Opt. Laser Technol.*** 96, 50 (2017).
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5. Y. J. Yoo, J. H. Lim, **G. J. Lee**, K.-I. Jang, and Y. M .Song, "Ultra-thin films with highly absorbent porous media fine-tunable for coloration and enhanced color purity", ***Nanoscale*** 9, 2986-2991 (2017).
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[Cover Picture Article]

4. J.-K. Song, D. H. Son, J. M. Kim, Y. J. Yoo, **G. J. Lee**, L. Wang, M. K. Choi, J. W. Yang, M. C. Lee, K. S. Do, J. H. Koo, N. Lu, J. H. Kim, T. H. Hyeon, Y. M. Song, and D.-H. Kim, "Wearable Force Touch Sensor Array Using a Flexible and Transparent Electrode", ***Adv. Func. Mater.*** 27, 6, 1605286 (2017).
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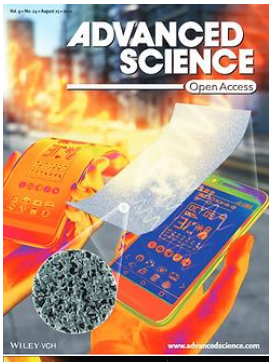

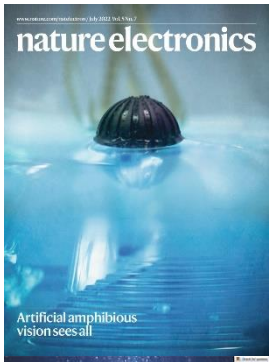

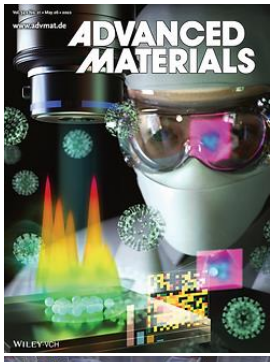

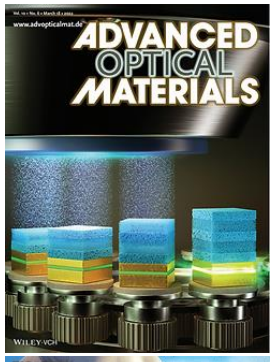

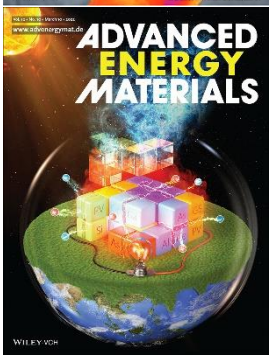

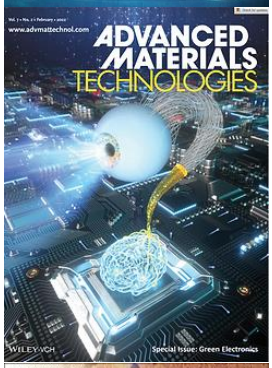

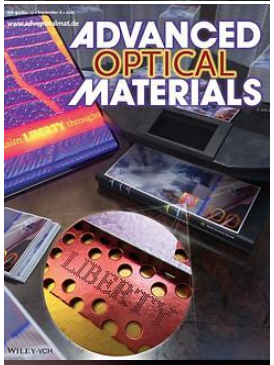

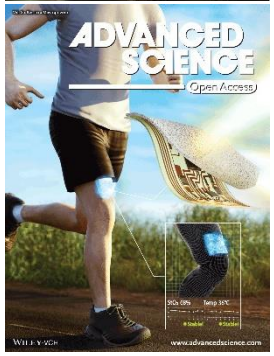

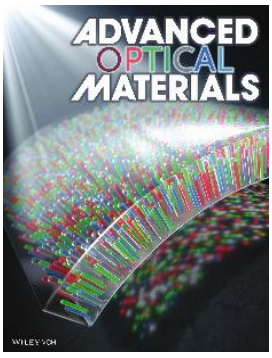

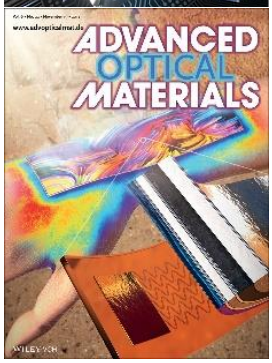

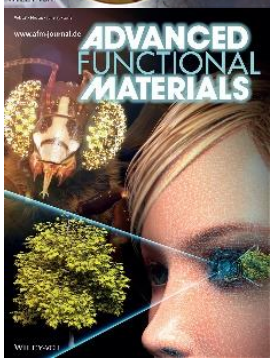

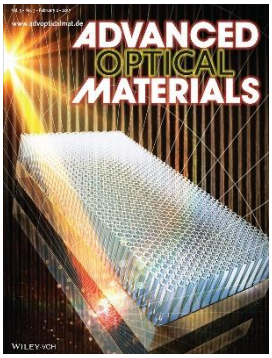
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