

## YOUNG MIN SONG

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### RESEARCH INTERESTS

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**Flexible Optoelectronics/Photonics** including bio-inspired cameras, flexible micro-LEDs, transparent electrodes, passive radiative cooling, photonic nanowires/rods

- Bio-inspired imaging systems, flexible image sensors
- Multi-functional nanophotonics
- Advanced healthcare optoelectronic systems
- Unconventional micro/nano-structures

### EDUCATION

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- Ph.D. Degree      **Gwangju Institute of Science and Technology(GIST), Korea**  
School of Information and Mechatronics, Sept. 2006~ Feb. 2011  
Advisor: Prof. Yong Tak Lee
- M.S. Degree      **Gwangju Institute of Science and Technology(GIST), Korea**  
Department of Information and Communications, Mar. 2004~ Feb. 2006  
Advisor: Prof. Yong Tak Lee
- B.S. Degree      **Yonsei University, Korea**  
Department of Biomedical Engineering, Mar 1999~ Feb. 2004

### WORK EXPERIENCES

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- Professor** (2021 – present), EECS, GIST, Korea  
**Adjunct Professor** (2020 – present), AI graduate school, GIST, Korea  
**Adjunct Professor** (2021 – present), MSE, Korea Univ., Korea  
**Affiliated Professor** (2020 – present), Anti-Viral Research Center, GIST, Korea  
**Chief Executive Officer** (2019 – present), FOEL Inc., Korea (<https://www.foel.cool>)
- Co-founder** (2018), The VELA Inc., Korea  
**Associate Professor** (2018 – 2021), EECS, GIST, Korea  
**Assistant Professor** (2016 – 2018), EECS, GIST, Korea  
**Assistant Professor** (2013 – 2016), EE, Pusan National University, Korea
- Postdoctoral research associate** (2011 – 2013), MSE, Univ. of Illinois at Urbana Champaign, USA  
Advisor: Prof. John A. Rogers  
**Postdoctoral research associate** (2011 – 2011), Ultrafast Fiber-Optic Networks Research Center, GIST, Korea  
Advisor: Prof. Yong Tak Lee

## HONORS AND AWARDS

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**Member of Y-KAST** (Young Korean Academy of Science and Technology) (2021)  
**Merit Award**, Ministry of SMEs and Startups (MSS), Korea (2020)  
**Achievement Award**, GIST (2020)  
**OSK Rising Star 30**, Optical Society of Korea (2020)  
**2019 Top 10 Nano Technology in Korea**, MSIT, Korea (2019)  
**Best poster award**, ISGMA 2017 (2017)  
**2013 Top 10 leading Science in Korea**, ‘insect’s eye camera’  
**Top 10 stories of 2013 in *Nature***, digital fly’s eye cameras  
**Golden Prize**, the 17<sup>th</sup> Samsung HumanTech Thesis Award, Samsung Electronics, Korea (2011)  
**Bronze Prize**, the 17<sup>th</sup> Samsung HumanTech Thesis Award, Samsung Electronics, Korea (2011)  
**Minister’s Award for outstanding graduate research** by the Ministry of Education, Science and Technology (MEST), Korea (2011)  
**DASAN Scholarship** from the GIST on DASAN project (2010)  
**National Graduate Science & Technology Scholarship** by Korea Student Aid Foundation (KOSAF) (2009-2010)  
**Highest Honors Student** in Yonsei University (2002, 2003)

## ARCHIVAL JOURNALS

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+Co-first author, \*Co-correspondence

Google Scholar Citations: 8575 (in total), h-index: 38 (Last update – Oct. 2022)

155. J. H. Ko+, S. H. Kim+, M. S. Kim, S. -Y. Heo, Y. J. Yoo, Y. J. Kim, H. Lee, and Y. M. Song\*, Lithography-Free, Large-Area Spatially Segmented Disordered Structure for Light Harvesting in Photovoltaic Modules, **ACS Appl. Mater. Interfaces** (2022) In press
154. Y. -G. Yu+, J. H. Ko+, J. H. An, B. -G. Kang\*, Y. M. Song\*, and J. -S. Lee\*, Self-assembly of POSS–Polystyrene Bottlebrush Block Copolymers on an Angle-Robust Selective Absorber for Enhancing the Purity of Reflective Structural Color, **ACS Appl. Mater. Interfaces** (2022) In press
153. 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)
152. 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. Electron.** 5, 452 (2022)  
[\[Cover Picture Article\]](#)
151. J. -K. Song+, J. Kim+, J. Yoon+, J. H. Koo+, H. Jung, K. Kang, S. -H. Sunwoo, S. Yoo, H. Chang, J. Jo, W. Baek, S. Lee, M. Lee, H. J. Kim, M. Shin, Y. J. Yoo, **Y. M. Song**, T. Hyeon\*, D. -H. Kim\*, and D. Son\*, Stretchable colour-sensitive quantum dot nanocomposites for shape-tunable multiplexed phototransistor arrays, **Nat. Nanotechnol.** 1-8 (2022)
150. J. H. Ko+, Y. J. Yoo+, Y. Lee, H. -H. Jeong\*, and **Y. M. Song\***, A review of tunable photonics: Optically active materials and applications from visible to terahertz, **iScience** 104727 (2022)
149. S. -Y. Heo, G. J. Lee\*, **Y. M. Song\***, Heat-shedding with photonic structures: radiative cooling and its potentials, **J. Mater. Chem. C**. Advance Article (2022)
148. 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\***, and J. -W. Jeong\*, Self-Cooling Gallium-Based Transformative Electronics with a Radiative Cooler for Reliable Stiffness Tuning in Outdoor Use, **Adv. Sci.** 2202549 (2022)
147. H. M. Kim+, Y. J. Yoo+, J. M. Lee, **Y. M. Song\***, A Wide Field-of-View Light-Field Camera with Adjustable Multiplicity for Practical Applications, **Sensors** 22, 3455 (2022)



146. W. Lee+, Y. J. Yoo+, J. Park+, J. H. Ko, Y. J. Kim, H. Yun, D. H. Kim\*, **Y. M. Song\***, D. -H. Kim\*, Perovskite microcells fabricated using swelling-induced crack propagation for colored solar windows, **Nat. Commun.** 13, 1946 (2022)
145. 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.** 2022, 2110003 (2022)  
[\[Cover Picture Article\]](#)
144. Y. J. Yoo+, **Y. M. Song\***, Editorial for the Topic on Micromachining for Advanced Biological Imaging, **Micromachines** 13(3), 474 (2022)
143. D. H. Seo+, S. -Y. Heo, D. H. Kim, Y. M. Song\*, G. J. Lee\*, Spatially-segmented colored radiative cooler with angle-robustness, **IEEE Photonics J.** 14, 2 (2022)
142. C. Jung+, S. -J. Kim+, J. Jang+, J. H. Ko, D. Kim, B. Ko, **Y. M. Song**, S. -H. Hong\*, J. Rho\*, Disordered nanoparticle-based etalon for ultrafast humidity responsive colorimetric sensors and anti-counterfeiting displays, **Sci. Adv.** 8, 10 (2022) (JCR 7%)
141. M. S. Kim+, G. J. Lee+, J. W. Leem, S. Choi, Y. L. Kim\*, **Y. M. Song\***, Revisiting silk: a lens-free optical physical unclonable function, **Nat. Commun.** 13, 247 (2022).
140. S. H. Kim+, J. H. Ko+, Y. J. Yoo, M. S. Kim, G. J. Lee, S. Ishii, **Y. M. Song\***, Single-Material, Near-Infrared Selective Absorber Based on Refractive Index-Tunable Tamm Plasmon Structure, **Adv. Opt. Mater.** 2102388 (2022).  
[\[Cover Picture Article\]](#)
139. S.-H Park, H. Lee, S. Lee, A. J. Minnich, W.-L. Jeong, D.-S Lee, S.-S. So, J.-H. Lee, **Y. M. Song**, Y.-D. Jho, Annealing-based Manipulation of Thermal Phonon Transport from Light Emitting Diodes to Graphene, **J. Appl. Phys.** 130, 244303 (2021)
138. S. -Y. Heo, D. H. Kim, **Y. M. Song\***, G. J. Lee\*, Determining the effectiveness of radiative cooler-integrated solar cells, **Adv. Energy Mater.** 2103258 (2021).  
[\[Cover Picture Article\]](#)
137. H. M. Kim+, M. S. Kim+, S. Chang+, J. Jeong, H. -G. Jeon\*, **Y. M. Song\***, Vari-Focal Light Field Camera for Extended Depth of Field, **Micromachines** 12, 1453 (2021).
136. D. H. Kim+, G. J. Lee+, S. -Y. Heo, S. Son, K. M. Kang, H. Lee, Y. M. Song\*, Ultra-thin and near-unity selective emitter for efficient cooling, **Opt. Express** 29, 20 (2021).
135. 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\*, K.-I. Jang\*, Instant, multi-scale dry transfer printing by atomic diffusion control at heterogeneous interfaces, **Sci. Adv.** 7, eabh0040 (2021).
134. Z. F. Mira+, S-Y. Heo+, D. H. Kim, G. J. Lee, **Y. M. Song\***, Multilayer Selective Passive Daytime Radiative Cooler Optimization Utilizing Memetic Algorithm, **J. Quant. Spectrosc. Radiat. Transf.** 272, 107774 (2021).
133. 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).  
[\[Cover Picture Article\]](#)
132. 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).  
[\[Cover Picture Article\]](#)

131. D. H. Kim<sup>+</sup>, G. J. Lee<sup>+</sup>, 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).
130. Y. Lee<sup>+</sup>, T. Kang<sup>+</sup>, H. R.Cho<sup>+</sup>, G. J. Lee<sup>+</sup>, O. K. Park, S. Kim, B. Lee, H. M.Kim, G. D. Cha, H. Kim, **Y. M. Song\***, S. H. Choi\*, T. Hyeon\*, and D.-H Kim\*, Localized delivery of theranostic nanoparticles and high-energy photons using microneedles-on-bioelectronics, **Adv. Mater.**, 2100425 (2021).
129. K.-J. Ko<sup>+</sup>, S.-R. Shin<sup>+</sup>, H. B. Lee, E. Jeong, Y. J. Yoo, H. M. Kim, **Y. M. Song\***, J. Yun\* and J.-W. Kang\*, Fabrication of an oxide/metal/oxide structured electrode integrated with anti-reflective film to enhance performance in flexible organic light-emitting diodes, **Mater. Today Energy.**, 20, 100704 (2021).
128. M. H. Kang<sup>+</sup>, G. J. Lee<sup>+</sup>, J. H. Lee, M. S. Kim, Z. Yan, J.-W. Jeong, and **Y. M. Song**, Outdoor-useable, Wireless/Battery-free Patch-type Tissue Oximeter with Radiative Cooling, **Adv. Sci.**, 2004885 (2021).  
[\[Cover Picture Article\]](#)
127. Y. J. Yoo<sup>+</sup>, S.-Y. Heo<sup>+</sup>, Y. J. Kim<sup>+</sup>, J. H. Ko, Z. F. Mira and Y. M. Song\*, Functional photonic structures for external interaction with flexible/wearable devices, **Nano Research** 21, 3388 (2021).
126. M. H. Kang<sup>+</sup>, G. J. Lee<sup>+</sup>, J. H. Yun and **Y. M. Song\***, NFC-Based Wearable Optoelectronics Working with Smartphone Application for Untact Healthcare, **Sensors**, 21, 878 (2021).
125. J. H. Lee, S. Chang, M. S. Kim, Y. J. Kim, H. M. Kim, and **Y. M. Song**, High-Identical Numerical Aperture, Multifocal Microlens Array through Single-Step Multi-Sized Hole Patterning Photolithography, **Micromachines** 11, 1068 (2020).
124. C. Choi<sup>+</sup>, J. Leem<sup>+</sup>, M. S. Kim<sup>+</sup>, A. Taqieddin, C. Cho, K. W. Cho, G. J. Lee, H. Seung, H. J. Bae, **Y. M. Song**, T. Hyeon, N. R. Aluru, S. Nam\*, and D.-H. Kim\*, Curved neuromorphic image sensor array using a MoS<sub>2</sub>-organic heterostructure inspired by the human visual recognition system, **Nat. Commun.** 11, 5934 (2020).
123. G. J. Lee<sup>+</sup>, D. H. Kim<sup>+</sup>, S.-Y. Heo and **Y. M. Song**, Spectrally and Spatially Selective Emitters Using Polymer Hybrid Spoof Plasmonics, **ACS Appl. Mater. Interfaces** 12, 53206 (2020).
122. K. J. Lee<sup>+</sup>, J.-W. Min<sup>+</sup>, B. Turedi, A. Y. Alsalloum, J.-H. Min, Y. J. Kim, Y. J. Yoo, S. Oh, N. Cho, R. C. Subedi, S. Mitra, S. E. Yoon, J. H. Kim, K. Park, T.-H. Chung, S. H. Jung, J.-H. Baek, **Y. M. Song**, I. S. Roqan, T. K. Ng, B. S. Ooi\*, and O. M. Bakr\*, **ACS Energy Lett.**, 5, 3295–3303 (2020).
121. S.-Y. Heo<sup>+</sup>, G. J. Lee<sup>+</sup>, D. H. Kim, Y. J. Kim, S. Ishii, M. S. Kim, T. J. Seok, B. J. Lee, H. Lee, **Y. M. Song**, A Janus emitter for passive heat release from enclosures, **Sci. Adv.** 6, eabb1906 (2020).
120. S. Chang, G. J. Lee, Y. M. Song, Recent advanced in vertically aligned nanowires for photonics applications, **Micromachines** 11, 726 (2020).
119. Y. J. Yoo<sup>+</sup>, W.-G. Kim<sup>+</sup>, J. H. Ko<sup>+</sup>, Y. J. Kim, Y. Lee, S. G. Stanciu, J.-M. Lee, S. Kim, J.-W. Oh\*, **Y. M. Song\***, Large-area virus coated ultra-thin colorimetric sensors with a highly lossy resonant promoter for enhanced chromaticity, **Adv. Sci.**, 2000978 (2020).  
[\[Cover Picture Article\]](#)
118. Y. J. Yoo<sup>+</sup>, J. H. Ko<sup>+</sup>, W.-G. Kim<sup>+</sup>, Y. J. Kim, D.-J. Kong, S. Kim, J.-W. Oh\*, **Y. M. Song\***, Dual mode colorimetric sensor based on ultra-thin resonating facilitator capable of nanometer-thick virus detection for environment monitoring, **ACS Appl. Nano. Mater.** 3, 6636 (2020).
117. M. S. Kim<sup>+</sup>, G. J. Lee<sup>+</sup>, C. Choi<sup>+</sup>, M. S. Kim<sup>+</sup>, M. Lee, S. Liu, K. W. Cho, H. M. Kim, H. Cho,

- M. K. Choi, N. Lu, **Y. M. Song\***, D. H. Kim\*, An aquatic vision inspired camera based on a monocentric lens and a silicon nanorod photodiode array, **Nat. Electron.** 3, 546 (2020).
116. G. J. Lee+, K. Park+, M. S. Kim, S. Chang, T. J. Seok, H.-G. Park, G. Ju, K. Kim, **Y. M. Song**, Selective and sensitive photon sieve based on III-V semiconductor nanowire forest fabricated by lithography-free process, **Adv. Opt. Mater.**, 2000198 (2020).  
[\[Cover Picture Article\]](#)
115. S. Kim, H. Song, H. Ahn, S. W. Jun, S. Kim, **Y. M. Song**, S. Y. Yang, C.-S. Kim, K. Kim, 3D super-resolved imaging in live cells using sub-diffractive plasmonic localization of hybrid nanopillar arrays, **Nanophotonics**, Ahead of Publication (2020).
114. H. B. Lee, N. Kumar, M. M. Ovhall, Y. J. Kim, **Y. M. Song**, J. W. Kang, Dopant-free, amorphous-crystalline heterophase SnO<sub>2</sub> electron transport bilayer enables >20% efficiency in triple-cation perovskite solar cells, **Adv. Funct. Mater.** 2001559 (2020).
113. S. H. Chew, A. Gliserin, S. Choi, X. T. Geng, S. Kim, W. Hwang, K. Baek, N. D. Anh, Y.-J. Kim, **Y. M. Song**, D. E. Kim, S.-Y. Jeong, S. Kim, Large-area grain-boundary-free copper films for plasmonics, **Appl. Sur. Sci.** 521 (2020).
112. Y. J. Kim+, Y. J. Yoo+, M. H. Kang, J. H. Ko, M. R. Park, D. E. Yoo, D. W. Lee, K. Kim, I. -S. Kang\*, and **Y. M. Song\***, Mechanotunable optical filters based on stretchable silicon nanowire arrays, **Nanophotonics**, Ahead of Publication (2020).
111. 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).
110. 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).
109. J. W. Leem, M. S. Kim, S. H. Choi, S. R. Kim, S. W. Kim, **Y. M. Song**, R. J. Young, and Y. L. Kim, Edible unclonable functions, **Nat. Commun.** 11, 328 (2020).
108. S. G. Stanciu\*, D. E. Tranca, L. Pastorino\*, S. Boi, **Y. M. Song\***, Y. J. Yoo, S. Ishii\*, R. Hristu, F. Yang, G. Bussetti, and G. A. Stanciu, Characterization of Nanomaterials by Locally Determining their Complex Permittivity with Scattering-Type Scanning Near Field Optical Microscopy, **ACS Appl. Nano Mater.** 3, 2 (2020).
107. H. Song, W. -K. Lee, J. Lee, S. -H. Lee, **Y. M. Song**, K. Kim, and J. -H. Choi, Comparison of Fabrication Methods Based on Nanoimprinting Lithography for Plasmonic Color Filter Fabrication, **Plasmonics** 1,8 (2020).
106. J. H. Ko+, Y. J. Yoo+, Y. J. Kim, S.-S. Lee, and **Y. M. Song**, Flexible, large-area covert polarization display based on ultrathin lossy nanocolumns on a metal film, **Adv. Funct. Mater.** 1908592 (2020).  
[\[Cover Picture Article\]](#)
105. X. Sheng, L. Gao, **Y. M. Song**, H. Tao, and S. -H. Yun, Bio-inspired and bio-integrated photonic materials and devices: feature issue introduction, **Opt. Mater. Express** 10(1), 155-156 (2020).
104. D. Seo, C.-S. Park and **Y. M. Song**, Design of Microdisk-Shaped Ge on Si Photodetector with Recess Structure for Refractive-Index Sensing, **Sensors** 19, 5253 (2019).
103. Y. J. Yoo, Y. J. Kim, S. -Y. Kim, J. H. Lee, K. Kim, J. H. Ko, J. W. Lee, B. H. Lee, and **Y. M. Song**, Mechanically robust antireflective moth-eye structures with a tailored coating of dielectric materials, **Opt. Mater. Express** 9, 372482 (2019).
102. K. Park+, Y. J. Kim+, T. Yoon, S. David and **Y. M. Song**, A methodological review on material growth and synthesis of solar-driven water splitting photoelectrochemical cells, **RSC Adv**, 9,

30112 (2019).

101. Y. J. Kim, Y. J. Yoo, D. E. Yoo, D. W. Lee, M. Kim, H. J. Jang, Y. -C. Kim, J. -H. Jang, I. -S. Kang\*, and **Y. M. Song\***, Enhanced light harvesting in photovoltaic devices using an edge-located one-dimensional grating polydimethylsiloxane membrane, **ACS Appl. Mater. Interfaces** 11, 36020 (2019).
100. J. Jang, H. Kim, **Y. M. Song**, and J.-U. Park, Implantation of electronic visual prosthesis for blindness restoration, **Opt. Mater. Express** 9, 3878 (2019).
99. 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).
98. D. H. Kim+, Y. J. Yoo+, J. H. Ko, Y. J. Kim, and **Y. M. Song**, Standard red green blue (sRGB) color representation with a tailored dual-resonance mode in metal/dielectric stacks, **Opt. Mater. Express** 9, 003342 (2019).
97. 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).
96. 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).
95. 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).
94. 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. Rep.** 9, 3350 (2019).
93. H. M. Kim+, M. S. Kim+, G. J. Lee, Y. J. Yoo, **Y. M. Song**, Large area fabrication of engineered microlens array with low sag height for light-field imaging, **Opt. Express** 27, 4 (2019)
92. 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)  
[\[Cover Picture Article\]](#)
91. 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)
90. 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**, Advance Article (2018)
89. H. H. Jung, J. W. Song, S. Nie, H. N. Jung, M. S. Kim, J. W. Jeong, **Y. M. Song\***, J. Z. Song\*, and K. I. Jang\*, Thin Metallic Heat Sink for Interfacial Thermal management in Biointegrated Optoelectronic Devices, **Adv. Mater. Technol.** 1800159 (2018)  
[\[Cover Picture Article\]](#)
88. 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.** E57502 (2018)
87. B. H. Kim , J. Lee, S. M. Won, Z. Xie, J.-K. Chang, Y. Yu, Y. K. Cho, H. Jang, J. Y. Jeong, Y. Lee, A. Ryu, D. H. Kim, K. H. Lee, J. Y. Lee, F. Liu, X. Wang, Q. Huo, S. Min, D. Wu, B. Ji, A. Banks,



- J. Kim, N. Oh, H. M. Jin, S. Han, D. Kang, C. H. Lee, **Y. M. Song**, Y. Zhang, Y. Huang, K.-I. Jang, and J. A. Rogers, Three-Dimensional Silicon Electronic Systems Fabricated by Compressive Buckling Process, **ACS Nano**. Article ASAP (2018)
86. 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 BiVO<sub>4</sub> Photoanode for Plasmon-Enhanced Photocatalytic Water Splitting, **J. Phys. Chem. C**. 122, 7088 (2018).
85. G. J. Lee+, C. S. Choi+, D. H. Kim\*, and **Y. M. Song\***, Bioinspired Artificial Eyes: Optic Components, Digital Cameras, and Visual Prostheses, **Adv. Funct. Mater.** 2018, 1705202 (2018).  
[\[Cover Picture Article\]](#)
84. C. S. Choi, M. K. Choi, S. Y. Liu, M. S. Kim, O. K. Park, C. K. Im, J. M. Kim, X. L. Qin, G. J. Lee, K. W. Cho, M. B. Kim, E. H. Joh, J. H. Lee, D. H. Son, S. H. Kwon, N. L. Jeon, **Y. M. Song**, N. S. Lu, and D. H. Kim, Human eye-inspired soft optoelectronic device using high-density MoS<sub>2</sub>-graphene curved image sensor array, **Nat. Commun.** 8, 1664 (2017).
83. H. S. Song, Y. J. Yoo, G. J. Lee, K. S. Chang, and **Y. M. Song**, Optical Design of Porous ZnO/TiO<sub>2</sub> Films for Highly Transparent Glasses with Broadband Ultraviolet Protection, **J. Nanomater.** 2738015, 8 (2017).
82. Y. J. Yoo, G. J. Lee, K. I. Jang, and **Y. M. Song**, Fabrication of Ultra-thin Color Films with Highly Absorbing Media Using Oblique Angle Deposition, **J. Vis. Exp.** 126, e56383 (2017).
81. M. S. Kim, G. J. Lee, H. M. Kim, and **Y. M. Song**, Parametric Optimization of Lateral NIPIN Phototransistors for Flexible Image Sensors, **Sensors** 17, 1774 (2017).
80. K. I. Jang, K. Li, H. U. Chung, S. Xu, H. N. Jung, Y. Yang, J. W. Kwak, H. H. Jung, J. Song, C. Yang, A. Wang, Z. Liu, J. Y. Lee, B. H. Kim, J. H. Kim, J. Y. Lee, Y. J. Yu, B. J. Kim, H. K. Jang, K. J. Yu, J. H. Kim, J. W. Lee, J. W. Jeong, **Y. M. Song**, Y. Huang, Y. Zhang & J. A. Rogers, Self-assembled three dimensional network designs for soft electronics, **Nat. Commun.** 8, 15894 (2017).
79. G. J. Lee, Y. J. Yoo, and **Y. M. Song**, Recent advances in imaging systems and photonic nanostructures inspired by insect eye geometry, **Appl. Spectrosc. Rev.** 1 (2017).
78. 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).
77. B. H. Kim, J. H. Kim, L. Persano, S. W. Hwang, S. M. Lee, J. Y. Lee, Y. J. Yu, Y. S. Kang, S. M. Won, J.H. Koo, Y. K. Cho, G. Hur, A. Banks, J. K. Song, P. Won, **Y. M. Song**, K. I. Jang, D. S. Kang, C. H. Lee, D. Pisignano, and J. A. Rogers, Dry Transient Electronic Systems by Use of Materials that Sublime, **Adv. Funct. Mater.** 27, 1606008 (2017).  
[\[Cover Picture Article\]](#)
76. 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. Funct. Mater.**, 1605286 (2017).
75. 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**, (2017).  
[\[Cover Picture Article\]](#)
74. K. W. Choi, Y. W. Yoon, J. H. Jung, C. W. Ahn, G. J. Lee, **Y. M. Song**, M. J. Ko, H. S. Lee, B. S. Kim, and I.-S. Kang, Super-Antireflective Structure Films with Precisely Controlled Refractive Index Profile, **Adv. Opt. Mater.**, 5(3) (2016).  
[\[Cover Picture Article\]](#)

73. W. I. Nam, E. K. Kang, H. G. Park, D.-H. Jun, **Y. M. Song**, Luminescent coverglass for improved absorption efficiency in III–V photovoltaic modules, **Electron. Lett.**, 52(22), 1891-1892 (2016).
72. K.-I. Jang, H. N. Jung, J. W. Lee, S. Xu, Y. H. Liu, Y. Ma, J.-W. Jeong, **Y. M. Song**, J. Kim, B. H. Kim, A. Banks, J. W. Kwak, Y. Yang, D. Shi, Z. Wei, X. Feng, U. Paik, Y. Huang, R. Ghaffari, and J. A. Rogers, Ferromagnetic, Folded Electrode Composite as a Soft Interface to the Skin for Long-Term Electrophysiological Recording, **Adv. Funt. Mater.**, 26(34), 7281-7290 (2016).  
[\[Cover Picture Article\]](#)
71. H. J. Choi, E. K. Kang, G. W. Ju, **Y. M. Song**, and Y. T. Lee, Shape-controllable, bottom-up fabrication of microlens using oblique angle deposition, **Opt. Lett.**, 41(14), 3328 (2016).
70. W. I. Nam, Y. J. Yoo and **Y. M. Song**, Geometrical shape design of nanophotonic surfaces for thin film solar cells, **Opt. Express**, 24(14), A1033 (2016).
69. E. K. Kang, Y. W. Lee, S. Ravindran, J. K. Lee, H. J. Choi, G. W. Ju, J. W. Min, **Y. M. Song**, I. B. Sohn, and Y. T. Lee, 4 channel  $\times$  10 Gb/s bidirectional optical subassembly using silicon optical bench with precise passive optical alignment, **Opt. Express**, 24(9), 10777 (2016).
68. G. J. Lee and **Y. M. Song**, Theoretical analysis and experiment of subwavelength structure-integrated red AlGaInP light-emitting diodes for uniform field distribution and enhanced light extraction efficiency, **AIP Adv.** 6, 035104 (2016).
67. W. B. Lee, H. C. Jang, S. J. Park, **Y. M. Song** and H. N. Lee, COMPU-EYE: a high resolution computational compound eye, **Opt. Express**, 24(3), 2013 (2016).
66. Y. J. Yoo, K. S. Chang and **Y. M. Song**, Design of ZnO hollow nanosphere arrays for UV absorbing transparent glasses, **Opt. Quant. Electron.** 48, 88 (2016).
65. H. M. Kim, S. H. Kim, G. J. Lee, K. J. Kim and **Y. M. Song**, Parametric studies on artificial Morpho butterfly wing scales for optical device applications, **J. Nanomater.**, 2015, 451834 (2015).
64. G. W. Ju, B. H. Na, Y. H. Park, **Y. M. Song** and Y. T. Lee, Recent approaches for broadening the spectral bandwidth in resonant cavity optoelectronic devices, **Adv. Condens. Matter. Phys.** 2015, 605170 (2015).
63. Y. H. Lee, K. W. Park, S. J. Kang, C. I. Yeo, J. B. Kim, E. K. Kang, **Y. M. Song** and Y. T. Lee, Fabrication and analysis of thin-film GaAs solar cell on flexible thermoplastic substrate using a low-pressure cold-welding, **Curr. Appl. Phys.**, 15, 1312 (2015).
62. G. W. Ju, B. H. Na, H. J. Choi, K. W. Kwang, **Y. M. Song** and Y. T. Lee, RCEPD with enhanced light absorption by crown-shaped quantum well, **IEEE Photonics Technol. Lett.** 27, 2047 (2015).
61. E. K. Kang, C. I. Yeo, S. J. Kang, J. W. Min, **Y. M. Song** and Y. T. Lee, Improved light absorption of GaInP/GaAs/Ge solar cell modules with Micro/Nanoengineered coverglasses, **IEEE J. Photovolt.** 5, 1130 (2015).
60. **Y. M. Song**, G. W. Ju, H. J. Choi, Y. W. Lee, B. H. Na and Y. T. Lee, Reflective displacement sensors with monolithically integrated VCSELs and RCEPDs, **Electron. Lett.** 51, 782 (2015).
59. E. K. Kang, E. Kwon, J. W. Min, **Y. M. Song**, and Y. T. Lee, Improved light extraction efficiency of GaN-based vertical LEDs using hierarchical micro/subwavelength structures, **Jpn. J. Appl. Phys.** 54, 06FH02 (2015).
58. Y. J. Yoo, K. S. Chang, S. W. Hong and **Y. M. Song**, Design of ZnS antireflective microstructures for mid- and far-infrared applications, **Opt. Quant. Electron.** 47, 3. (2015).
57. C. I. Yeo, H. J. Choi, **Y. M. Song**, S. J. Kang, Y. T. Lee, A single-material graded refractive index



- layer for improving the efficiency of III–V triple-junction solar cells, **J. Mater. Chem. A** 3, 7235 (2015).  
[\[Cover Picture Article\]](#)
56. K. I. Jang, H. U. Chung, S. Xu, C. H. Lee, H. Luan, J. Jeong, H. Cheng, G. T. Kim, S. Y. Han, J. W. Lee, J. Kim, M. Cho, F. Miao, Y. Yang, H. N. Jung, M. Flavin, H. Liu, G. W. Kong, K. J. Yu, S. I. Rhee, J. Chung, B. Kim, J. W. Kwak, M. H. Yun, J. Y. Kim, **Y. M. Song**, U. Paik, Y. Zhang, Y. Huang, J. A. Rogers, Soft network composite materials with deterministic and bio-inspired designs, **Nat. Commun.** 6, 6556.(2015).
55. Y. Hattori, L. Falgout, W. Lee, S.Y. Jung, E. Poon, J.W. Lee, I. Na, A. Geisler, D. Sadhwani, Y. Zhang, Y. Su, X. Wang, Z. Liu, J. Xia, H. Cheng, R.C. Webb, A.P. Bonifas, P. Won, J.W. Jeong, K.I. Jang, **Y. M. Song**, B. Nardone, M. Nodzenski, J.A. Fan, Y. Huang, D.P. West, A.S. Paller, M. Alam, W.H. Yeo, J.A. Rogers, Multifunctional Skin-Like Electronics for Quantitative, Clinical Monitoring of Cutaneous Wound Healing, **Adv. Healthc. Mater.** 10.1002/adhm.201400073 (2014).
54. C.L. Tan, S.J. Jang, **Y. M. Song**, K. Alameh, Y.T. Lee, Bimetallic non-alloyed NPs for improving the broadband optical absorption of thin amorphous silicon substrates, **Nanoscale Res. Lett.** 9, 181 (2014).
53. K.I. Jang, S.Y. Han, S. Xu, K.E. Mathewson, Y.H. Zhang, J.W. Jeong, G.T. Kim, R.C. Webb, J.W. Lee, T.J. Dawidczyk, R.H. Kim, **Y. M. Song**, W.H. Yeo, S. Kim, H. Cheng, S.I. Rhee, J.H. Chung, B.G. Kim, H.U. Chung, D.J. Lee, Y.Y. Yang, M.G. Cho, J.G. Gaspar, R. Carbonari, M. Fabiani, G. Gratton, Y.G. Huang, J.A. Rogers, Rugged and breathable forms of stretchable electronics with adherent composite substrates for transcutaneous monitoring, **Nat. Commun.** 5, 4779 (2014).
52. C. I. Yeo, E. K. Kang, S. K. Lee, **Y. M. Song**, Y. T. Lee, Efficient enhancement of III-V triple-junction solar cell using nanostructured bifunctional coverglass with enhanced transmittance and self-cleaning property, **IEEE Photonics Journal** 6, 8400209 (2014).
51. Y. Zhang , S. Wang , X. Li , J.A. Fan , S. Xu , **Y. M. Song** , K.J Choi , W.H Yeo W.S. Lee , S.N. Nazaar , B. Lu , L. Yin , K.C. Hwang , John A. Rogers , Y.G. Huang , Experimental and Theoretical Studies of Serpentine Microstructures Bonded To Prestrained Elastomers for Stretchable Electronics, **Adv. Funct. Mater.** 24, 2028 (2014).
50. **Y. M. Song**, G. C. Park, E. K. Kang, C. I. Yeo, Y. T. Lee, Antireflective grassy surface on glass substrates with self-masked dry etching, **Nanoscale Res. Lett.** 8, 505 (2013)
49. C. I. Yeo, J. B. Kim, **Y. M. Song**, and Y. T. Lee, Antireflective silicon nanostructures with hydrophobicity by metal-assisted chemical etching for solar cell applications, **Nanoscale Res. Lett.** 8, 159 (2013).
48. J. W. Leem, **Y. M. Song**, J. S. Yu, Biomimetic artificial Si compound eye surface structures with broadband and wide-angle antireflection properties for Si-based optoelectronic applications, **Nanoscale** 5, 10455 (2013)
47. C. I. Yeo, **Y. M. Song**, S. J. Jang, and Y. T. Lee, Optimal design of nano-scale surface light trapping structures for enhancing light absorption in thin film photovoltaics, **J. Appl. Phys.** 114, 024305 (2013).
46. E. K. Kang, **Y. M. Song**, S. J. Jang, C. I. Yeo, and Y. T. Lee, Increased light extraction from GaN light-emitting diodes by SiN<sub>x</sub> compound eyes, **IEEE Photon. Technol. Lett.** 25, 1118 (2013).
45. **Y. M. Song**<sup>+</sup>, Y. Xie<sup>+</sup>, V. Malyarchuk<sup>+</sup>, J. Xiao<sup>+</sup>, I. Jung, K.-J. Choi, Z. Liu, H. Park, C. Lu, R.-H. Kim, R. Li, K. B. Crozier, Y. Huang, J. A. Rogers, Digital cameras with designs inspired by the Arthropod eye, **Nature** 497, 95 (2013).  
[\[Highlighted in BBC, NPR, USA today, IEEE Spectrum, etc.\]](#)
44. T.-I. Kim, J. G. McCall, Y. H. Jung, X. Huang, E. R. Siuda, Y. Li, **Y. M. Song**, H. A. Pao, C. Lu, S.



- D. Lee, I. S. Song, G. C. Shin, M. P. Tan, Y. Huang, J. A. Rogers, Injectable, cellular-scale optoelectronics with applications for wireless optogenetics, **Science** 340, 211 (2013).  
[\[Highlighted in BBC, IEEE Spectrum, MIT technology review, etc.\]](#)
43. Y. M. Song, Y. Jeong, C. I. Yeo, and Y. T. Lee, *Enhanced power generation in concentrated photovoltaics using broadband antireflective coverglasses with moth eye structures*, **Opt. Express** 20, A916 (2012).
42. R.-H. Kim, S. Kim, Y. M. Song, H. Jung, T.-I. Kim, J. Lee, X. Li, K. D. Choquette, and J. A. Rogers, *Flexible vertical light emitting diodes*, **Small** 8, 3123 (2012).
41. S.-W. Hwang, H. Tao, D.-H. Kim, H. Cheng, J.-K. Song, E. Rill, M. A. Brenckle, B. Panilaitis, S. M. Won, Y.-S. Kim, Y. M. Song, K. J. Yu, A. Ameen, R. Li, Y. Su, M. Yang, D. L. Kaplan, M. R. Zakin, M. J. Slepian, Y. Huang, F. G. Omenetto, and J. A. Rogers, *A physically transient form of silicon electronics*, **Science** 337, 1459 (2012).  
[\[Cover Picture Article\]](#)  
[\[Highlighted in BBC, CNN, USA today, etc.\]](#)
40. J. W. Leem, Y. M. Song, and J. S. Yu, *Effect of Al-doped ZnO film thickness on periodic GaAs subwavelength grating structures for photovoltaic device applications*, **Mater. Res. Bull.** 47, 2884 (2012).
39. G. C. Park, Y. M. Song, E. K. Kang, and Y. T. Lee, *Size-dependent optical behavior of disordered nanostructures on glass substrates*, **Appl. Opt.** 51, 5890 (2012).
38. K. Choi, S. H. Park, Y. M. Song, C. Cho, and H. S. Lee, *Robustly nano-tailored honeycomb structure for high-throughput antireflection polymer films*, **J. Mat. Chem.** 22, 17037 (2012).
37. Y. M. Song, J. H. Jang, J. C. Lee, E. K. Kang, and Y. T. Lee, *Disordered submicron structures integrated on glass substrate for broadband absorption enhancement of thin-film solar cells*, **Sol. Energy Mater. Sol. Cells** 101, 73 (2012).
36. J. W. Leem, Y. M. Song, and J. S. Yu, *Hydrophobic and antireflective characteristics of thermally oxidized periodic Si surface nanostructures*, **Appl. Phys. B** 107, 309 (2012).
35. J. W. Leem, Y. M. Song, and J. S. Yu, *Broadband antireflective germanium surfaces based on subwavelength structures for photovoltaic cell applications*, **Opt. Express** 19, 26308 (2011).
34. J. W. Leem, Y. M. Song, and J. S. Yu, *Six-fold hexagonal symmetric nanostructures with various periodic shapes on GaAs substrates for efficient antireflection and hydrophobic properties*, **Nanotechnology** 22, 485304 (2011).
33. J. W. Leem, Y. M. Song, and J. S. Yu, *Broadband wide-angle antireflection enhancement in AZO/Si shell/core subwavelength grating structures with hydrophobic surface for Si-based solar cells*, **Opt. Express** 19, A1155 (2011).
32. S. J. Jang, Y. M. Song, C. I. Yeo, C. Y. Park, and Y. T. Lee, *Highly tolerant a-Si distributed Bragg reflector fabricated by oblique angle deposition*, **Opt. Mater. Express** 1, 451 (2011).
31. C. I. Yeo, Y. M. Song, S. J. Jang, and Y. T. Lee, *Wafer-scale broadband antireflective silicon fabricated by metal-assisted chemical etching using spin-coated Ag ink for solar cell applications*, **Opt. Express** 19, A1109 (2011).
30. G. C. Park, Y. M. Song, J. H. Ha, and Y. T. Lee, *Broadband antireflective glasses with subwavelength structures using randomly distributed Ag nanoparticles*, **J. Nanosci. Nanotechnol.** 11, 6152 (2011).
29. J. W. Leem, J. S. Yu, Y. M. Song, and Y. T. Lee, *Influence of etching process parameters on the antireflection property of Si SWs by thermally dewetted Ag and Ag/SiO<sub>2</sub> nanopatterns*, **Phy. Stat.**

- Sol. A** 208, 1902 (2011).
28. **Y. M. Song**, G. C. Park, S. J. Jang, J. H. Ha, J. S. Yu, and Y. T. Lee, *Multifunctional light escaping architecture inspired by compound eye surface structure: From understanding to experimental demonstration*, **Opt. Express** 19, A157 (2011).  
[Selected for Virtual Journal for biomedical Optics 6(4), 2011]  
[\[Introduced in Nature Photonics Research Highlights\]](#)
27. S. J. Jang, **Y. M. Song**, C. I. Yeo, C. Y. Park, J. S. Yu, and Y. T. Lee, *Antireflective property of thin film a-Si solar cell structures with graded refractive index structure*, **Opt. Express** 19, A108 (2011).
26. E. S. Choi, **Y. M. Song**, G. C. Park, and Y. T. Lee, *Disordered antireflective subwavelength structures using Ag nanoparticles for GaN-based optical device applications*, **J. Nanosci. Nanotechnol.** 11, 1342 (2011).
25. J. W. Leem, J. S. Yu, **Y. M. Song**, and Y. T. Lee, *Antireflective characteristics of disordered GaAs subwavelength structures by thermally dewetted Au nanoparticles*, **Sol. Energy Mater. Sol. Cells** 95, 669 (2011).
24. H. K. Lee, D. H. Lee, **Y. M. Song**, Y. T. Lee, and J. S. Yu, *Thermal measurements and analysis of AlGaInP/GaInP MQW red LEDs with different chip sizes and substrate thicknesses*, **Solid State Electron.** 56, 79 (2011).
23. S. J. Jang, **Y. M. Song**, J. S. Yu, C. I. Yeo, and Y. T. Lee, *Antireflective properties of porous Si nanocolumnar structures with graded refractive index layers*, **Opt. Lett.** 36, 253 (2011).
22. S. J. Jang, **Y. M. Song**, H. J. Choi, J. S. Yu, and Y. T. Lee, *Structural and optical properties of silicon by tilted angle evaporation*, **Surf. Coat. Technol.** 205, S447 (2010).
21. **Y. M. Song**, E. S. Choi, G. C. Park, C. Y. Park, S. J. Jang, and Y. T. Lee, *Disordered antireflective nanostructures on GaN-based light-emitting diodes using Ag nanoparticles for improved light extraction efficiency*, **Appl. Phys. Lett.** 97, 093110 (2010).
20. J. W. Leem, **Y. M. Song**, Y. T. Lee, and J. S. Yu, *Effect of etching parameters on antireflection properties of Si subwavelength grating structures for solar cell applications*, **Appl. Phys. B** 100, 891 (2010).
19. K. Choi, S. H. Park, **Y. M. Song**, Y. T. Lee, C. J. Hwangbo, H. Yang, and H. S. Lee, *Nano-tailoring the surface structure for the monolithic high-performance antireflection polymer film*, **Adv. Mater.** 22, 3713 (2010).  
[\[Cover Picture Article\]](#)
18. J. W. Leem, **Y. M. Song**, Y. T. Lee, and J. S. Yu, *Antireflective properties of AZO subwavelength gratings patterned by holographic lithography*, **Appl. Phys. B** 99, 695 (2010).
17. **Y. M. Song**, H. J. Choi, J. S. Yu, and Y. T. Lee, *Design of highly transparent glasses with broadband antireflective subwavelength structures*, **Opt. Express** 18, 13063 (2010).
16. **Y. M. Song**, S. J. Jang, J. S. Yu, and Y. T. Lee, *Bioinspired parabola subwavelength structures for improved broadband antireflection*, **Small** 6, 984 (2010).  
[\[Cover Picture Article\]](#)
15. **Y. M. Song**, J. S. Yu, and Y. T. Lee, *Antireflective submicrometer gratings on thin-film silicon solar cells for light-absorption enhancement*, **Opt. Lett.** 35, 276 (2010).
14. **Y. M. Song**, E. S. Choi, J. S. Yu, and Y. T. Lee, *Light-extraction enhancement of red AlGaInP light-emitting diodes with antireflective subwavelength structures*, **Opt. Express** 17, 20991 (2009).



13. K. S. Chang, S. C. Yang, **Y. M. Song**, Y. T. Lee, and G. H. Kim, *Various shaped semiconductor microlens arrays fabricated by selective oxidation of AlGaAs*, **IEEE Photon. Technol. Lett.** 21, 1465 (2009).
12. H. K. Lee, **Y. M. Song**, Y. T. Lee, and J. S. Yu, *Thermal analysis of asymmetric intracavity-contacted oxide-aperture VCSELs for efficient heat dissipation*, **Solid State Electron.** 53, 1086 (2009).
11. **Y. M. Song** and Y. T. Lee, *Investigation of geometrical effects of antireflective subwavelength grating structures for optical device applications*, **Opt. Quant. Electron.** 41, 771 (2009).
10. **Y. M. Song**, B. K. Jeong, B. H. Na, K. S. Chang, J. S. Yu, and Y. T. Lee, *High-speed characteristics of vertical cavity surface emitting lasers and resonant-cavity-enhanced photodetectors based on intracavity-contacted structures*, **Appl. Opt.** 48, F11 (2009).
9. **Y. M. Song**, S. Y. Bae, J. S. Yu, and Y. T. Lee, *Closely packed and aspect-ratio controlled antireflection subwavelength gratings on GaAs using a lens-like shape transfer*, **Opt. Lett.** 34, 1702 (2009).
8. V. V. Lysak, I. M. Safonov, **Y. M. Song**, I. A. Sukhoivanov, and Y. T. Lee, *High speed intracavity-contacted vertical cavity surface emitting lasers with separated quantum wells*, **Opt. Quant. Electron.** 40, 1219 (2009).
7. **Y. M. Song**, K. S. Chang, B. H. Na, J. S. Yu, and Y. T. Lee, *Low thermal resistance, high-speed 980 nm asymmetric intracavity-contacted oxide-aperture VCSELs*, **Phy. Stat. Sol. a** 206, 1631 (2009).
6. **Y. M. Song**, K. S. Chang, B. H. Na, J. S. Yu, and Y. T. Lee, *Precise etch-depth control of microlens-integrated intracavity contacted vertical-cavity surface-emitting lasers by in-situ laser reflectometry and reflectivity modeling*, **Thin Solid Films** 517, 5773 (2009).
5. B. K. Jeong, **Y. M. Song**, V. V. Lysak, and Y. T. Lee, *Large area InGaAs/GaAs resonant cavity enhanced photodetector for sensor applications*, **J. Optoelectron. Adv. Mater.** 10, 2547 (2008).
4. K. S. Chang, **Y. M. Song**, and Y. T. Lee, *Stable single-mode operation of VCSELs with a mode selective aperture*, **Appl. Phys. B** 89, 231 (2007).
3. V. V. Lysak, K. S. Chang, **Y. M. Song**, and Y. T. Lee, *Step-by-step parameter-extraction method for high-speed vertical cavity laser's rate-equation model*, **J. of Optoelectron. Adv. Mater.** 9, 2813 (2007).
2. K. S. Chang, **Y. M. Song**, and Y. T. Lee, *Self-aligned microlens-integrated vertical-cavity surface-emitting lasers*, **IEEE Photon. Technol. Lett.** 18, 2203 (2006).
1. K. S. Chang, **Y. M. Song**, and Y. T. Lee, *Microlens fabrication by selective oxidation of composition graded digital alloy AlGaAs*, **IEEE Photon. Technol. Lett.** 18, 121 (2006).

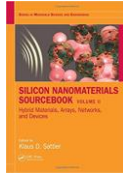
## BOOK CHAPTERS

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C.-M. Kyung et al., 'Smart Sensors and Systems', Springer

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