

NANO KOREA 2020

July 1~3, KINTEX, Korea

Chang-Hee Cho

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EDUCATION

GIST, Gwangju, Korea	Ph.D	Materials Science	2009
GIST, Gwangju, Korea	MS	Materials Science	2004
Kyung Hee University, Seoul, Korea	BS	Physics	2002

PROFESSIONAL ACTIVITIES

- Postdoctoral Researcher, Materials Science, University of Pennsylvania, USA (Sep. 2009 ~ Aug. 2012)
- Assistant Professor, DGIST, Department of Emerging Materials Science, Daegu, South Korea (Sep. 2012 ~ Feb. 2017)
- Associate Professor, DGIST, Department of Emerging Materials Science, Daegu, South Korea (Mar. 2017 ~ Present)

AWARD AND HONORS

- Distinguished Alumni Award (by GIST, Nov. 2014)
- Best Academic Award (by DGIST, Jan. 2017)

MAIN SCIENTIFIC PUBLICATION

- "Room temperature polariton lasing in quantum heterostructure nanocavities"
J. W. Kang, B. Song, W. Liu, S. J. Park, R. Agarwal, and C. H. Cho
Science Advances **5**, eaau9338 (2019).
- "Surface-diffusion-limited growth of atomically thin WS₂ crystals from core-shell nuclei"
S. Jo, J. W. Jung, J. Baik, J. W. Kang, I. K. Park, T. S. Bae, H. S. Chung, and C. H. Cho
Nanoscale **11**, 8706-8714 (2019).
- "Radial multi-quantum well ZnO nanorod arrays for nanoscale ultraviolet light-emitting diodes"
J. W. Kang, B. H. Kim, H. Song, Y. R. Jo, S. H. Hong, G. Y. Jung, B. J. Kim, S. J. Park, and

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Nanoscale **10**, 14812-14818 (2018).

- "Periodically Diameter-Modulated Semiconductor Nanowires for Enhanced Optical Absorption"
M. Ko, S. H. Baek, B. Song, J. W. Kang, S. A. Kim, and C. H. Cho
Advanced Materials **28**, 2504-2510 (2016).
- "Studies of Hot Photoluminescence in Plasmonically Coupled Silicon via Variable Energy Excitation and Temperature-Dependent Spectroscopy"
C. O. Aspetti, C. H. Cho, R. Agarwal, and R. Agarwal
Nano Letters **14**, 5413–5422 (2014).
- "Silicon coupled with plasmon nanocavities generates bright visible hot luminescence"
C. H. Cho, C. O. Aspetti, J. Park, and R. Agarwal
Nature Photonics **7**, 285 (2013).
- "All-optical active switching in individual semiconductor nanowires"
B. Piccione, C. H. Cho, L. K. van Vugt, and R. Agarwal
Nature Nanotechnology **7**, 640 (2012).
- "Tailoring hot-exciton emission and lifetimes in semiconducting nanowires via whispering-gallery nanocavity plasmons"
C. H. Cho, C. O. Aspetti, M. E. Turk, J. M. Kikkawa, S. W. Nam, and R. Agarwal
Nature Materials **10**, 669 (2011).

RESEARCH INTERESTS

- Light-Matter Interactions at Nanoscale
- 2-dimensional Semiconductors
- Next generation optoelectronic devices such as exciton-polariton lasers and optical logic devices