

NANO KOREA 2020

July 1~3, KINTEX, Korea

Chi Hwan Lee

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EDUCATION

Stanford University	Ph.D.	Mechanical Engineering	2013
Stanford University	MS	Mechanical Engineering	2009
Illinois Institute of Technology	BS	Mechanical Engineering	2007

PROFESSIONAL ACTIVITIES

- Founding Member and Chief Technical Officer of Curasis, Dec. 2018 – Pres.
- Founding Member and Chief Technical Officer of Rescue Biomedical, Aug. 2019 – Pres.
- Founding Member and Scientific Advisor of Omniply Tech, Sep. 2018 – Pres.
- Assistant Professor of Biomedical Engineering, Purdue University, Aug. 2015 – Pres.
- Assistant Professor of Mechanical Engineering, Purdue University, Aug. 2015 – Pres.
- Assistant Professor of Materials Engineering, Purdue University, Jan. 2020 – Pres.
- Assistant Professor of Speech, Language, and Hearing Sciences, Purdue University, Apr. 2018 –
- Faculty Associate of Center for Implantable Bioelectronics, Purdue University, Aug. 2015 – Pres.
- Faculty Associate of Center for Scalable Manufacturing, Purdue University, Aug. 2015 – Pres.
- Faculty Associate of Birck Nanotechnology Center, Purdue University, Aug. 2015 – Pres.
- Faculty Associate of Mi-Bio Center, Purdue University, June 2018 – Pres.
- Faculty Associate of Interdisciplinary Biomedical Sciences Program, Dec 2019 – Pres.

AWARD AND HONORS

- Tau Beta Pi, Engineering Honor Society, 2006
- Graduate Student Silver Award, Materials Research Society (MRS), 2013
- Top Innovation Award, Technology Connect World National Innovation Summit, 2013
- Faculty Award of Excellence, Preeminent Team Award, Purdue University, 2017
- Purdue Engineering Faculty Conversation Research Award in Healthcare/Medicine, 2018
- Ralph W. and Grace M. Showalter Research Trust Award, 2018
- Hanwha Advanced Materials Non-Tenure Faculty Award, Hanhwa Corp., South Korea, 2018
- Seed for Success Award in recognition of obtaining an external sponsored award of >\$1M, 2018
- Recognized for the Outstanding Engineering Teacher, Purdue University, 2018

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- National Institutes of Health (NIH) Trailblazer Award for New and Early Stage Investigators, 2019
- Korean-American Scientists and Engineers Association (KSEA) Young Investigator Award, 2019
- Ajouin Outstanding Professional Award, Ajou University, Korea, 2019
- Elected as a Member of Ajou Leaders Honor Club, Ajou University, Korea, 2020
- Faculty Award of Excellence for Early Career Research, Purdue University, 2020

MAIN SCIENTIFIC PUBLICATION

- M. Kim, C. Kantarcigil, B. Kim, R. K. Baruah, S. Maity, Y. Park, K. Kim, S. Lee, J. B. Malandraki, A. Avlani, A. Smith, S. Sen, M. A. Alam, G. Malandraki, **C. H. Lee**, Flexible submental sensor patch with remote monitoring controls for management of oropharyngeal swallowing disorders, *Science Advances*, 5, 12, eaay3210 (2019).
- K. Kim, B. Kim, **C. H. Lee**, Printing flexible and hybrid electronics for human skin and eye-interfaced health monitoring systems, *Advanced Materials*, 1902051 (2019)
- H. Kim, M. Kim, H. Jang, B. Kim, D. Kim, **C. H. Lee**, Sensor-instrumented scaffold integrated with microporous sponge-like ultra-buoy for long-term 3D mapping of cellular behaviors and functions, *ACS Nano*, 13, 7, 7898-7904 (2019)
- B. Kim, J. Jeon, Y. Zhang, D. Wie, J. Hwang, S. Lee, D. Walker, D. Abeysinghe, A. Urbas, B. Xu, Z. Ku, **C. H. Lee**, Deterministic nanoassembly of quasi-3D plasmonic nanoarrays with arbitrary substrate materials and structures, *Nano Letters*, 19, 81 5796 (2019).
- M. Kim, R. Parasuraman, L. Wang, Y. Park, B. Kim, S. Lee, N. Lu, B. Min, **C. H. Lee**, Soft-packaged sensory glove system for human-like natural interaction and control of prosthetic hands, *NPG Asia Materials*, 11:43 (2019)
- Y. Zhang, B. Kim, Y. Gao, D. Wie, **C. H. Lee**^{*}, B. Xu^{*}, Chemomechanics of transfer printing of thin films in a liquid environment, *International Journal of Solids and Structures*, 180-181, 30-44 (2019)
- E. Lee, M. Kim, **C. H. Lee**, Skin-mountable biosensors and therapeutics, *Annual Review of Biomedical Engineering*, 21, 299-323 (2019)
- E. Lee, **C. H. Lee**, Skin-mountable flexible needle patch for minimally invasive controlled drug delivery, *OnDrugDelivery*, 97, 22-25 (2019)
- H. Kim, H. Jang, B. Kim, M. Kim, D. Wie, H. Kim, D. Kim, **C. H. Lee**, Flexible elastomer patch with vertical silicon nanoneedles for intracellular and intratissue nanoinjection of biomolecules, *Science Advances*, 4, 11, eaau6972 (2018)
- D. Wie, Y. Zhang, M. Kim, B. Kim, S. Park, Y. Kim, P. Irazoqui, X. Zheng, B. Xu, **C. H. Lee**, Wafer-recyclable, environment-friendly transfer printing for large-scale thin film nanoelectronics, *Proceedings of National Academy of Sciences (PNAS)*, 115, 7236 (2018)
- S. Han, M. Kim, B. Wang, D. Wie, S. Wang, **C. H. Lee**, Networked nanocomposite elastomers for mechanically reinforced skin electronics, *Advanced Materials*, 28, 46, 10257 (2016)

RESEARCH INTERESTS

- Wearable Health Monitoring Systems
- Functional Soft Materials
- Flexible and Stretchable Electronics
- Micro-Transfer Printing Technologies