

Hakho Lee, PhD

Hostetter MGH Research Scholar
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Research Interests

- Developing novel diagnostic technology
 - Synthesis and characterization of nanomaterials
 - Magnetic, electric, and optical biosensors
 - Machine learning and computational data analytics
- Clinical applications
 - Early detection of cancer and treatment monitoring
 - Infection and sepsis diagnosis

Education

09/1998 – 06/2005	Ph.D. Physics, Harvard University, Cambridge, Massachusetts
03/1992 – 02/1998	BS Physics, Seoul National University, Republic of Korea

Professional Experience

10/2010 – 05/2015	Assistant Professor in Radiology, Harvard Medical School
10/2010 –	Director in Biomedical Engineering Program, Center for Systems Biology, MGH
06/2015 –	Associate Professor in Radiology, Harvard Medical School
09/2015 –	Adjunct Faculty, Center for NanoMedicine, Yonsei University, Republic of Korea
03/2017 –	Hostetter MGH Research Scholar

Honors

1992	First place in the nationwide college entrance exam, Republic of Korea
1998	Grand prize, Undergraduate Thesis Competition, Ministry of Education, Republic of Korea
1999	Edward Russell Scholarship, Harvard University
2014	Milton Fund, Harvard University
2015	Final list, Blavatnik National Awards for Young Scientists, The New York Academy of Sciences
2017	Hostetter MGH Research Scholar
2019	Innovation Discovery Award, Partners Healthcare Inc.
2019	External Program Consultant NIH NCATS Extracellular RNA Communication Consortium
2020	Principal Investigator Mentoring Award, MGH Center for Faculty Development

Recent Papers (>150 publications)

1. Park J, Park JS, Huang CH, Jo A, Cook K, Wang R, Lin HY, Van Deun J, Li H, Min J, Wang L, Yoon G, Carter BS, Balaj L, Choi GS, Castro CM, Weissleder R, Lee H (2021) An integrated magneto-electrochemical device for the rapid profiling of tumour extracellular vesicles from blood plasma. **Nat Biomed Eng** 5:678-689.
2. Yu H, Lee H, Cheong J, Woo SW, Oh J, Oh H-K, Lee J-H, Zheng H, Castro CM, Yoo Y-E, Kim M-G, Cheon J, Weissleder R, Lee H. (2021) A rapid assay provides on-site quantification of tetrahydrocannabinol in oral fluid. **Sci Transl Med** 13:eabe2352.
3. Cho YK, Kim H, Bénard A, Woo H-K, Czubayko F, David P, Hansen FJ, Lee JI, Park JH, Schneck E, Weber GF, Shin I-S, Lee H. (2022) Electrochemiluminescence in paired signal electrode (ECLipse) enables modular and scalable biosensing. **Sci Adv** 8:eabq4022.