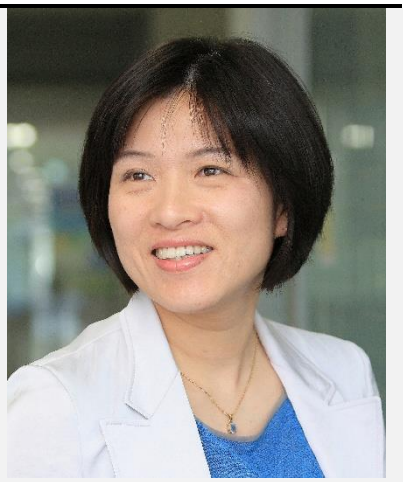

Prof. Yoon-Kyoung Cho

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Yoon-Kyoung Cho is a full professor of Biomedical Engineering at Ulsan National Institute of Science and Technology (UNIST), Republic of Korea, where she also serves as Dean of the College of Information and Biotechnology. She is a member of the National Academy of Engineering of Korea (NAEK), an associate editor of Lab on a Chip, a Fellow of the Royal Society of Chemistry, and currently serves as President of the Chemical and Biological Microsystems Society (CBMS).

She received her Ph.D. in Materials Science and Engineering from the University of Illinois at Urbana–Champaign in 1999, and her M.S. (1994) and B.S. (1992) degrees in Chemical Engineering from POSTECH. Prior to joining UNIST in 2008, she spent nine years as a Senior Researcher at the Samsung Advanced Institute of Technology (1999–2008), where she contributed to the development of silicon chip–based PCR systems and centrifugal lab-on-a-disc technologies for practical diagnostic applications.

At UNIST, Professor Cho has played key roles in establishing and leading academic programs across biomedical engineering and related disciplines. She also served as a Group Leader at the Institute for Basic Science (IBS) Center for Soft and Living Matter from 2015 to 2024. Her research focuses on lab-on-a-chip and lab-on-a-disc systems for detecting rare biomarkers—such as extracellular vesicles, circulating tumor cells, and nucleic acids—directly from raw biological samples. Her group has developed fully automated centrifugal microfluidic platforms that integrate sample preparation, separation, and analysis, enabling rapid and sensitive point-of-care diagnostics. In parallel, she has made significant contributions to microengineered models for quantitative studies of cell migration, intercellular communication, immune surveillance, and tumor microenvironments. Her work is widely cited and recognized for both scientific originality and translational impact.

More information about her research and publications is available at http://fruits.unist.ac.kr and on Google Scholar.