Curriculum Vitae

Junmin Lee

Associate Professor
Department of Materials Science & Technology, Pohang University of Science and Technology (POSTECH), Korea

Educational Background & Professional Experience

2025.09–Present	Associate Professor, Department of MSE, POSTECH, Korea
2021.09–2025.08	Assistant Professor, Department of MSE, POSTECH, Korea
2020.06–2021.08	Postdoc, Terasaki Institute for Biomedical Innovation, LA, USA (Advisor: Prof. Ali Khademhosseini)
2017.12–2020.05	Postdoc, Department of Bioengineering, UCLA, USA (Advisor: Prof. Ali Khademhosseini)
2017.06–2017.12	Postdoc, Div. of Medicine, Brigham Women's Hospital/Harvard Medical School, Boston, USA (Advisor: Prof. Ali Khademhosseini)
2012.08–2017.05	Ph.D., Department of Materials Science and Engineering, University of Illinois at Urbana–Champaign (UIUC), USA
2008.09–2010.08	M.S., Department of Materials Science and Engineering, Yonsei University, Seoul, Korea
2003.03–2008.08	B.S., Department of Metallurgical System Engineering, Yonsei University, Seoul, Korea

Research Interests

Biomaterials, Tissue engineering, Stem cells, Organs–on–a–chip

Publications

1. Y. Choi, W. Jang, R. Kang, U. Batjargal, J. Song, S. Park, M. Kim, H. Cho, J. Kim, Y. S. Zhang, H. Kim*, J. Lee*, "Developmentally Inspired, Mechanical–Metabolic Dual Gradient Osteochondral Constructs Bridging Regeneration and Therapeutic Screening", Advanced Science, Vol. 45, e16602 (2026).
2. S. Park†, G. Lee†, J. Seo, S. E. Yu, J. Kang, J. Lee*, Y. T. Lee*, "All 2D van der Waals Junction–FET Biosensor with External Capacitive Sensing for Rapid, Label–Free Detection of Liver Cancer Biomarkers", Biosensors and Bioelectronics, Vol. 302, 118541 (2026).
3. D. Kim, G. Ha, M. Kim, M. Kwak, H. Kim*, J. Lee*," Geometry–Guided Osteogenesis in Bone–on–a–Chip Systems Using Triply Periodic Minimal Surface Scaffolds", Advanced Healthcare Materials, Vol. 15, e02773 (2026).
4. R. Kang, S. Shin, Y. Choi, W. Jang, S. Park, M. K. Lee, H. Cho, Y. S. Zhang, H. Kim*, B. Y. Park*, J. Lee*, "Bioengineered Skin Grafts from Patient–Derived Decellularized Extracellular Matrix and Autologous Cells for Personalized Regenerative", Advanced Science, Vol. 44, 2511889 (2025).
5. J. Lee†,*, O. Jeon†, J. Koh, H. Kim, S. J. Lee, Y. Zhu, J. Song, Y. Lee, R. Nasiri, K. Lee, P. Bandaru, H. Cho, S. Zhang, N. R. Barros, S. Ahadian, H. Kang, M. R. Dokmeci, J. Lee, D. Di Carlo, E. Alsberg, A. Khademhosseini. "Micromechanical property mismatch between pericellular and extracellular matrices regulates stem cell articular and hypertrophic chondrogenesis" Matter, Vol. 6(2), 475–492 (2023).