

<Curriculum Vitae>

Cho, Young-Sam

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Educations

- B.S. in Mechanical Engineering at KAIST, 1997. 2.
- M.S. in Mechanical Engineering at KAIST, 1999. 2.
(Thesis: Analysis of shear band via element free galerkin method)
- Ph.D. in Mechanical Engineering at KAIST, 2004. 8.
(Thesis: Finite element method for incompatible meshes and propagating cracks)

Work Experiences

- Post-Doctoral Researcher at KAIST (2004.9 ~ 2005. 2)
- Senior Researcher at Korea Institute of Machinery and Materials (KIMM) (2005. 3 ~ 2008. 8)
- Assistant Professor at Wonkwang University (2008. 9 ~ 2012. 8)
- Associate Professor at Wonkwang University (2012. 9 ~ 2017.8)
- Professor at Wonkwang University (2017.9 ~ Now)
- Dean, Division of Mechanical and Automotive Engineering at Wonkwang University (2015. 3 ~ 2017. 2)
- Dean, Department of Mechanical Design Engineering at Wonkwang University (2019. 3 ~ 2022. 2)
- Director General, Leading-Innovation University for Industry 4.0 (ENER-G Organization) (2020. 3 ~ 2022. 2)
- Head, Dept. of R&D support in Industry-Academy Co-op. Found. (2021.6 ~ 2022.12)
- Director General, LINC 3.0 (2022.5 ~ 2025.5)
- **Head, MECHABIO GROUP (Annex Research Institute) (2022.2 ~ Now)**
- **Head, Industry-Academy Cooperation Foundation (2022.12 ~ Now)**

Academic Activities

- Member of the Organizing Committee, *International Symposium on Nature-Inspired Technology (international conference)* (2008 ~ 2016)
- Member of the Steering Committee, The Korean Society of Mechanical Engineers (2016 ~ 2018)
- **Member of the Steering Committee, Division of Bioengineering, The Korean Society of Mechanical Engineers (2008 ~ Now)**

- **Vise President, Division of Bioengineering, The Korean Society of Mechanical Engineers (2023 ~ Now)**
- Conference Chair, Spring conference, Division of Bioengineering, The Korean Society of Mechanical Engineers (2024)
- Guest Editor of Special Issue, *Polymers (SCIE journal)* (2021)
- **Section Board Member, Polymers (SCIE journal) (2021 ~ Now)**
- Member of Organizing Committee, *TERMIS-AP 2022 (international conference)* (2022)
- **Member of the Steering Committee, Division of Bio-Health, The Korean Society for Precision Engineering (2023 ~ Now)**
- **Member of the Steering Committee, The Korean Society for Precision Engineering (2024 ~ Now)**

Social Activities

- Member of the Steering Committee, JBTP (Jeonbuk TechnoPark) (2023 ~ Now)
- Committee Member, Jeonbuk Agricultural Life Innovation Growth Committee (2023 ~ Now)
- Committee Member, Promotion Committee of Saemangeum Secondary Battery Specialized Complex (2023 ~ Now)

Research Interests

- 3D/4D-printed Tissue-Engineering Scaffold
- Micro-physiological system (bone)
- DfAM (Design for Additive Manufacturing)
- Mechano-bactericidal surface/antibacterial surface
- Superhydrophobic/superhydrophilic Surface
- Computational Solid Mechanics

Research grants (as PI or sub-PI, 15 grants/~~₩~~5,970M)

- **"4D scaffold for non-uniform undercut bone defect regeneration: design, manufacturing, and in-vivo assessment considering spatial-gradient expansion/shape conformity/shape parameters."** *Mid-Career Researcher Program, National Research Foundation of Korea, ₩1,250M (2024.6 ~ 2029.5) (as PI)*
- "Basic Research Laboratory for bone-on-a-chip osteoporosis model," Basic Research Laboratory, National Research Foundation of Korea, ₩1,375M (2022.6 ~ 2025.2) **(as PI)**
- "Development of 4D hybrid scaffold for enhancing bone regeneration ability: computational design and fabrication technique for 4D printing to improve fitting score," Mid-Career Researcher Program, National Research Foundation of Korea, ₩600.5M (2021.3 ~ 2024.2) **(as PI)**
- "Fabrication and assessment of bone-regeneration scaffold: topologically optimal-design scaffold by computational analysis and DfAM," General Research Program, National Research Foundation of Korea, ₩50M (2020.6 ~ 2021.5) **(as PI)**
- "Development of Vision-based Intelligent Monitoring System for Structural Safety Diagnosis," Ministry of Science and ICT, ₩159M (2017.3 ~ 2020.2) **(as sub-PI)**
- "Development of manufacturing system for biodegradable kagome-structure spinal fusion cage having osteogenesis promoting function, cage manufacturing, and cage assessment," Mid-

Career Researcher Program, National Research Foundation of Korea, ₩500M (2017.3 ~ 2020.2) **(as PI)**

- “Development of 3D printer for hyaluronic-acid-based scaffolds,” Jeonbuk Techno-Park, ₩30M (2015.6 ~ 2016.5) **(as PI)**
- Subtitle of “Development of patient-oriented 3D bioprinting process for regeneration large bone defect” in “Development and Translational research of bioprinting based defect specific therapeutic materials for various jaw bone defect,” Korea Health Industry Development Institute, ₩400M (2014.5 ~ 2017.4) **(as sub-PI)**
- “Development of fabrication method of multi-layer/multi-branched hollow cylinder: scaffold for peroneal nerve regeneration,” Young Researcher Program, National Research Foundation of Korea, ₩153.2M (2014.5 ~ 2017.4) **(as PI)**
- “Fabrication and cell assessment of 3D knitting PDO scaffold,” N-finders (company), ₩15M (2012.9 ~ 2013.2) **(as PI)**
- “Development of solid freeform fabrication technology for computer-aided scaffold,” Ministry of Knowledge Economy, ₩130.1M (2010.12 ~ 2014.3) **(as sub-PI)**
- “Nature-Inspired Smart Water/Solvent Collection management Technology,” Ministry of Knowledge Economy, ₩431.4M (2010.12 ~ 2016.3) **(as sub-PI)**
- “Development of MLS-based finite elements for 3D branched crack propagation,” General Research Program, National Research Foundation of Korea, ₩179.9M (2010.9 ~ 2013.8) **(as PI)**
- “Safety Assurance Platform Technology for Nano products,” Ministry of Knowledge Economy, ₩329M (2009.11 ~ 2014.10) **(as sub-PI)**
- “MLS-based FEM platform and its application to complex-mesh problems,” General Research Program, National Research Foundation of Korea, ₩366.6M (2007.9 ~ 2010.8) **(as PI)**

HRD grants (as PI or sub-PI, 4 grants/₩16,270.9M)

- “SCOUT (STARTUP Co-Op University for Transition of edu),” Ministry of Education, ₩187.5M (Phase I: 2023.3 ~ 2025.2) **(as sub-P)**
- “LINC 3.0,” Ministry of Education, ₩13,500M (Phase I: 2022.3 ~ 2025.2) **(as PI)**
- “Business-linked youth technical training project,” Ministry of Science and ICT, ₩623.1M (2023.3 ~ 2024.2) **(as PI)**
- “Leading-Innovation University for Industry 4.0,” Ministry of Education, ₩1,960.3M (2020.3 ~ 2022.2) **(as PI)**

IPRs (Intellectual Property Rights)

- Domestic patent registration: 30 cases (discharged: 8 cases)
- US patent pending: 1 case
- PCT: 2 cases
- Domestic SW registration: 12 cases

Awards

- 2024 KSME Research Excellence Award in Bioengineering, KSME

International Journal Publications (SCIE)

74. S.-J. Han, M.-S. Ghim, R. L. Reyes, M. Quan, G. Kim, Y. Y. Kim, and **Y.-S. Cho**, "Assessment of Bone Regeneration Efficacy with Respect to Channel Direction of the Scaffold," *Journal of Bionic Engineering*, accepted, 2026 (**SCIE, co-corresponding author, IF=5.8, Rank by JIF: Top 8.1%**)
73. M.-J. Jang, C. W. Lim, **Y.-S. Cho**, and H.-H. Park, "Evaluation of Antibacterial Performance of Nanopillar Structures According to Mechanical Stiffness," *International Journal of Precision Engineering and Manufacturing*, accepted, 2025. (**SCIE, co-corresponding author, IF=3.6, Rank by JIF: Top 21.7%**)
72. J. Kim, H. W. Kim, and **Y.-S. Cho**, "Additive Manufacturing of Bead-Chain-shaped Scaffolds with AI-Based Process Optimization," *Polymers*, Vol. 17, article number 2973, 2025. (**SCIE, co-corresponding author, IF=4.9, Rank by JIF: Top 19.7%**)
71. R. L. Reyes, S.-G. Yu, N.-U. Kang, D. Sohn, H. W. Kim, and **Y.-S. Cho**, "Artificial Neural Network-Guided Optimization of Kagome Bone Regeneration Scaffolds Based on Asymptotic Expansion Homogenization Results and Its Validation via Additive Manufacturing," *Journal of Materials Research and Technology*, Vol. 39, pp. 5751-5764, 2025. (**SCIE, co-corresponding author, IF=6.6, Rank by JIF: Top 9.8%**)
70. H.-K. Kim, S. E. Ganbaatar, R. L. Reyes, **Y.-S. Cho**, and H.-H. Park, "Hydrothermally synthesized ZnO nanowire surfaces: A versatile strategies for antibacterial action," *Chemical Engineering Journal*, Vol. 525, article number 170236, 2025. (**SCIE, co-corresponding author, IF=13.2, Rank by JIF: Top 3.0%**)
69. M. K. Kim, J. Yoon, D. Kim, J. Kim, J.-S. Kim, G. Go, J. Song, S. Son, K. Park, J. Lee, D. Lee, S. Cho, W. Choi, J. Min, S. Jeon, H. Lee, **Y.-S. Cho**, S.-J. Lee, H.-G. Yi, A. Choi, D. Choi, S. Han, J. Ko, D.-w. Cho, D. S. Kim, J. Jang, H.-W. Kang, "Advanced Biomanufacturing Technologies for Micro-physiological Systems," *International Journal of Precision Engineering and Manufacturing*, Volume 26, pages 2411-2462, 2025. (**SCIE, co-author, IF=3.6, Rank by JIF: Top 21.7%**)
68. M.-S. Ghim, S.-J. Jang, E.-Y. Choi, M. Quan, Y. Y. Kim, and **Y.-S. Cho**, "Bone Regeneration Efficacy and Applicability of Defect-Fitting 4D Scaffolds Based on Shape Conformity in Three-dimensional Curved Bone Defects," *Journal of Bionic Engineering*, Vol. 22, pp. 2595-2614, 2025 (**SCIE, co-corresponding author, IF=5.8, Rank by JIF: Top 8.1%**)
67. R. L. Reyes, M.-S. Ghim, E. C. Kim, N.-U. Kang, D. Sohn, and **Y.-S. Cho**, "Hybrid Modified Cubic-Honeycomb-Plate Structure: A Novel Bone Regeneration Scaffold with Enhanced Mechanical Stiffness Achieved through High Printing Fidelity," *Journal of Bionic Engineering*, Vol. 22, pp. 1881-1901, 2025. (**SCIE, corresponding author, IF=5.8, Rank by JIF: Top 8.1%**)

66. N.-U. Kang, E. C. Kim, S.-G. Yu, H. J. U, Y. M. Kim, G. Y. Baek, **Y.-S. Cho**, and H. W. Kim, "Evaluation of pre-osteoblastic cell line behaviors under low shear stress conditions," *Lab on a Chip*, Vol. 25, article number 2401, 2025. **(SCIE, corresponding author, IF=5.4, Rank by JIF: Top 8.7%)**
65. S.-H. Lee, J. Lee, N.-U. Kang, Y. S. Cho, S. C. Heo, Y. Park, and **Y.-S. Cho**, "PCL scaffold with well-defined hierarchical pores effectively controls cell migration and alignment of human mesenchymal stem cells," *Scientific Reports*, Vol. 15, article number 11542, 2025. **(SCIE, co-corresponding author, IF=3.9, Rank by JIF: Top 18.0%)**
64. S. E. Ganbaatar, H.-K. Kim, N.-U. Kang, E. C. Kim, H. J. U, Y.-S. Cho, and H.-H. Park, "Calcium Phosphate (CaP) Composite Nanostructures on Polycaprolactone (PCL): Synergistic Effects on Antibacterial Activity and Osteoblast Behavior," *Polymers*, Vol. 17, article number 200, 2025. **(SCIE, co-corresponding author, IF=4.9, Rank by JIF: Top 19.7%)**
63. S. E. Ganbaatar, Y. M. Kim, H.-K. Kim, **Y.-S. Cho**, and H.-H. Park, "The influence of nanoline spacing on the antibacterial effect of the nanoline-array surface," *Colloids and Surfaces B: Biointerfaces*, Volume 245, paper number 114242, 2025. **(SCIE, co-corresponding author, IF=5.6, Rank by JIF: Top 8.2%)**
62. N.-U. Kang, G. H. Kim, H.-K. Kim, S. H. Kim, Y. Y. Kim, H.-H. Park, and **Y.-S. Cho**, "Poly(ethylene glycol) dimethacrylate (PEGDMA) multi-functional pillar-patterned surface for osteogenic differentiation of pre-osteoblast and anti-bacterial effects to *Escherichia coli* and *Staphylococcus aureus*," *Surfaces and Interfaces*, Vol. 55, article number 105221, 2024. **(SCIE, co-corresponding author, IF=6.3, Rank by JIF: Top 14.6%)**
61. H.-K. Kim, J.-H. Park, M.-J. Jang, S.-J. Han, **Y.-S. Cho**, and H.-H. Park, "Flexible and transparent nanohole-patterned film with antibacterial properties against *Staphylococcus aureus*," *Journal of Materials Chemistry B*, Vol. 12, pp. 7298-7310, 2024. **(SCIE, co-corresponding author, IF=5.8, Rank by JIF: Top 28.2%)**
60. H.-K. Kim, S.-J. Han, **Y.-S. Cho**, and H.-H. Park, "Antibacterial and Anti-Fogging Nanopillar Array Films: Targeted Efficacy Against *Staphylococcus aureus*," *ACS Applied Polymer Materials*, Vol. 6, pp. 2836-2848, 2024. **(SCIE, co-corresponding author, IF=4.8, Rank by JIF: Top 22.9%) [Supplementary Cover]**
59. Y. M. Kim, M-S. Ghim, M.-L. Quan, Y. Y. Kim, and **Y.-S. Cho**, "Experimental Verification of the Impact of the Contact Area between the Defect Site and the Scaffold on Bone Regeneration Efficacy," *Polymers*, Vol. 16, article number 338, 2024. **(SCIE, co-corresponding author, IF=4.9, Rank by JIF: Top 19.7%) [Rolling image in the journal homepage]**
58. H.-K. Kim, H. W. Baek, H.-H. Park, and **Y.-S. Cho**, "Reusable mechano-bactericidal surface with echinoid-shaped hierarchical micro/nano-structure," *Colloids and Surfaces B:*

- Biointerfaces*, article number 113729, 2024. (**SCIE, co-corresponding author, IF=5.6, Rank by JIF: Top 8.2%**)
57. H.-J. Jeong, H. Nam, J.-S. Kim, S. Cho, H.-H. Park, Y.-S. Cho, H. Jeon, J. Jang, and S.-J. Lee, "Dragging 3D printing technique controls pore sizes of tissue engineered blood vessels to induce spontaneous cellular assembly," *Bioactive Materials*, Vol. 31, pp. 590-602, 2024. (**SCIE, co-author, IF=20.3, Rank by JIF: Top 2.0%**)
56. M.-S. Ghim, E.-Y. Choi, Y. Y. Kim, and Y.-S. Cho, "Quantitative analysis of bone regeneration efficacy as shape conformity of scaffold: Evidence for importance of additive-manufacturing precision in tissue engineering," *Materials & Design*, Vol. 231, article number 112073, 2023. (**SCIE, co-corresponding author, IF=7.9, Rank by JIF: Top 19.0%**)
55. Y. S. Cho, M.-S. Ghim, M. W. Hong, Y. Y. Kim, and Y.-S. Cho, "Strategy to improve endogenous bone regeneration of 3D-printed PCL/nano-HA composite scaffold: Collagen designs with BMP-2 and FGF-2," *Materials & Design*, Vol. 229, article number 111913, 2023. (**SCIE, co-corresponding author, IF=7.9, Rank by JIF: Top 19.0%**)
54. M.-S. Ghim, H. W. Kim, and Y.-S. Cho, "Enhancement fidelity of Kagome scaffold for bone regeneration by design for additive manufacturing," *Materials & Design*, Vol. 225, article number 111608, 2023. (**SCIE, corresponding author, IF=7.9, Rank by JIF: Top 19.0%**)
53. S.-H. Lee, K.-G. Lee, J. Lee, Y. S. Cho, M.-S. Ghim, S. Kim, S.-J. Heo, Y. Park, Y.-S. Cho, and B.-K. Lee, "Three Dimensional Kagome Structures in a PCL/HA-based Hydrogel Scaffold to Lead Slow BMP-2 Release for Effective Bone Regeneration," *Bio-Design and Manufacturing*, Vol. 6(1), pp. 12-25, 2023. (**SCIE, co-corresponding author, IF=7.6, Rank by JIF: Top 14.1%**)
52. H.-K. Kim, S.-J. Jang, Y.-S. Cho, and H.-H. Park, "Fabrication of Nanostructured Polycaprolactone (PCL) Film Using a Thermal Imprinting Technique and Assessment of Antibacterial Function for Its Application," *Polymers*, Vol. 14(24), article number 14245527, 2022. (**SCIE, co-corresponding author, IF=4.9, Rank by JIF: Top 19.7%**)
51. H.-K. Kim, Y.-S. Cho, and H.-H. Park, "PEGDMA-based pillar-shape nanostructured antibacterial film having mechanical robustness," *ACS Applied Bio Materials*, Vol. 5, pp. 3006-3012, 2022. (**SCIE, co-corresponding author, IF=4.7, Rank by JCI: Top 39.1%**)
[Supplementary Cover]
50. R. Lopez Reyes, M.-S. Ghim, N.-U. Kang, J.-W. Park, S.-J. Gwak, and Y.-S. Cho, "Development and assessment of modified-honeycomb-structure scaffold for bone tissue engineering," *Additive Manufacturing*, Vol. 54, article number 102740, 2022. (**SCIE, corresponding author, IF=11.1, Rank by JIF: Top 6.3%**)
49. Y.-Y. Chang, S. Lee, H.-J. Jeong, Y.-S. Cho, S.-J. Lee, and J.-H. Yun, "In vivo evaluation of 3D printed polycaprolactone composite scaffold and recombinant human bone morphogenetic protein-2 for vertical bone augmentation with simultaneous implant placement on rabbit

- calvaria," *Journal of Biomedical Materials Research Part B: Applied Biomaterials*, Vol. 110(5), pp. 1103-1112, 2022. (SCIE, co-author, IF=3.4, Rank by JIF: Top 54.7%)
48. J.-K. Ku, K.-G. Lee, M.-S. Ghim, Y.-K. Kim, S.-H. Park, Y. Park, Y.-S. Cho, and B.-K. Lee, "Onlay-graft of 3D printed Kagome-structure PCL scaffold incorporated with rhBMP-2 based on hyaluronic acid hydrogel," *Biomedical Materials*, Vol. 16 (5), article number 055004, 2021. (SCIE, co-author, IF=3.7, Rank by JIF: Top 40.7%)
47. H.-J. Jeong, S.-W. Lee, M. W. Hong, Y. Y. Kim, K. D. Seo, Y.-S. Cho, and S.-J. Lee, "Total Meniscus Reconstruction Using a Polymeric Hybrid-Scaffold: Combined with 3D-Printed Biomimetic Framework and Micro-Particle," *Polymers*, Vol. 13 (12), article number 1910, 2021. (SCIE, co-corresponding author, IF=4.9, Rank by JIF: Top 19.7%)
46. Y. S. Cho, S.-J. Gwak, and Y.-S. Cho, "Fabrication of Polycaprolactone/Nano Hydroxyapatite (PCL/nHA) 3D Scaffold with Enhanced In Vitro Cell Response via Design for Additive Manufacturing (DfAM)," *Polymers*, Vol. 13 (9), article number 1394, 2021. (SCIE, co-corresponding author, IF=4.9, Rank by JIF: Top 19.7%)
45. Y. S. Cho, H.-K. Kim, M.-S. Ghim, M. W. Hong, Y. Y. Kim, and Y.-S. Cho, "Evaluation of the Antibacterial Activity and Cell Response for 3D-Printed Polycaprolactone/Nanohydroxyapatite Scaffold with Zinc Oxide Coating," *Polymers*, Vol. 12 (10), article number 2193, 2020. (SCIE, co-corresponding author, IF=4.9, Rank by JIF: Top 19.7%)
44. Y. S. Cho, M. Quan, N.-U. Kang, H.-J. Jeong, M. W. Hong, Y. Y. Kim, and Y.-S. Cho, "Strategy for enhancing mechanical properties and bone regeneration of 3D polycaprolactone kagome scaffold: Nano hydroxyapatite composite and its exposure," *European Polymer Journal*, Vol. 134, article number 109814, 2020. (SCIE, co-corresponding author, IF=6.3, Rank by JIF: Top 10.1%)
43. H. Nam, H.-J. Jeong, Y. Jo, J. Y. Lee, D.-H. Ha, J. H. Kim, J. H. Chung, Y.-S. Cho, D.-W. Cho, S.-J. Lee, and J. Jang, "Multi-layered free-form 3D cell-printed tubular construct with decellularized inner and outer esophageal tissue-derived bioinks," *Scientific Reports*, Vol. 10 (1), pp. 1-14, 2020. (SCIE, co-author, IF=3.9, Rank by JIF: Top 18.0%)
42. H.-J. Jeong, S.-J. Gwak, K. D. Seo, S. Y. Lee, J.-H. Yun, Y.-S. Cho, and S.-J. Lee, "Fabrication of three-dimensional composite scaffold for simultaneous alveolar bone regeneration in dental implant installation," *International Journal of Molecular Sciences*, Vol. 21 (5), article number 1863, 2020. (SCIE, co-corresponding author, IF=4.9, Rank by JIF: Top 22.3%)
41. Y. S. Cho, M. Quan, S.-H. Lee, M. W. Hong, Y. Y. Kim, and Y.-S. Cho, "Assessment of osteogenesis for 3D-printed polycaprolactone/hydroxyapatite composite scaffold with enhanced exposure of hydroxyapatite using rat calvarial defect model," *Composites Science and Technology*, Vol. 184, article number 107844, 2019. (SCIE, co-corresponding author, IF=9.8, Rank by JIF: Top 13.2%)

40. N.-U. Kang, M. W. Hong, Y. Y. Kim, Y.-S. Cho, and S.-J. Lee, "Development of a powder extruder system for dual-pore tissue-engineering scaffold fabrication," *Journal of Bionic Engineering*, Vol. 16, pp. 686-659, 2019. (SCIE, co-corresponding author, IF=5.8, Rank by JIF: Top 8.1%)
39. S.-H. Lee, K.-G. Lee, J.-H. Hwang, Y. S. Cho, K.-S. Lee, H.-J. Jeong, S.-H. Park, Y. Park, Y.-S. Cho, and B.-K. Lee, "Evaluation of mechanical strength and bone regeneration ability of 3D printed kagome-structure scaffold using rabbit calvarial defect model," *Materials Science and Engineering C-Materials for Biological Applications*, Vol. 98, pp. 949-959, 2019. (SCIE, co-corresponding author, IF=8.1, Rank by JIF: Top 14.2%)
38. H.-J. Jeong, S.-J. Gwak, N.-U. Kang, M. W. Hong, Y. Y. Kim, Y.-S. Cho, and S.-J. Lee, "Bioreactor mimicking knee-joint movement for the regeneration of tissue-engineered cartilage," *Journal of Mechanical Science and Technology*, Vol.33, pp. 1841-1850, 2019. (SCIE, co-corresponding author, IF=1.7, Rank by JIF: Top 64.6%)
37. Y. S. Cho, S. Choi, S.-H. Lee, K. K. Kim, and Y.-S. Cho, "Assessments of polycaprolactone/hydroxyapatite composite scaffold with enhanced biomimetic mineralization by exposure to hydroxyapatite via a 3D-printing system and alkaline erosion," *European Polymer Journal*, Vol. 113, pp. 340-348, 2019. (SCIE, co-corresponding author, IF=6.3, Rank by JIF: Top 10.1%)
36. J. Lee, S.-H. Lee, B. S. Kim, Y.-S. Cho, and Y. Park, "Development and Evaluation of Hyaluronic Acid-Based Hybrid Bio-Ink for Tissue Regeneration," *Tissue Engineering and Regenerative Medicine*, Vol. 15, pp. 761-769, 2018. (SCIE, co-author, IF=4.1, Rank by JIF: Top 39.1%)
35. J. Lee, S.-H. Lee, B.-K. Lee, S.-H. Park, Y.-S. Cho, and Y. Park, "Fabrication of Microchannels and Evaluation of Guided Vascularization in Biomimetic Hydrogels," *Tissue Engineering and Regenerative Medicine*, Vol. 15, pp. 403-413, 2018. (SCIE, co-corresponding author, IF=4.1, Rank by JIF: Top 39.1%)
34. K.-G. Lee, K.-S. Lee, Y.-J. Kang, J.-H. Hwang, S.-H. Lee, S.-H. Park, Y. Park, Y.-S. Cho, and B.-K. Lee, "Rabbit Calvarial Defect Model for Customized 3D-Printed Bone Grafts," *Tissue Engineering Part C-Methods*, Vol. 24, pp. 255-262, 2018. (SCIE, co-author, IF=2.6, Rank by JIF: Top 57.7%)
33. Y. S. Cho, J. S. Lee, M. W. Hong, S.-H. Lee, Y. Y. Kim, and Y.-S. Cho, "Comparative Assessment of the Ability of Dual-Pore Structure and Hydroxyapatite to Enhance the Proliferation of Osteoblast-Like Cells in Well-Interconnected Scaffolds," *International Journal of Precision Engineering and Manufacturing*, Vol. 19, pp. 605-612, 2018. (SCIE, co-corresponding author, IF=3.6, Rank by JIF: Top 21.7%)
32. Y. S. Cho, M. W. Hong, M. Quan, S.-Y. Kim, S.-H. Lee, S.-J. Lee, Y. Y. Kim, and Y.-S. Cho, "Assessments for bone regeneration using the polycaprolactone SLUP (salt-leaching using

- powder) scaffold,” *Journal of Biomedical Materials Research Part A*, Vol. 105, pp. 3432-3444, 2017. (SCIE, co-corresponding author, IF=3.9, Rank by JIF: Top 37.5%)
31. Y. S. Cho, M. W. Hong, H.-J. Jeong, S.-J. Lee, Y. Y. Kim, and Y.-S. Cho, “The fabrication of well-interconnected polycaprolactone/hydroxyapatite composite scaffolds, enhancing the exposure of hydroxyapatite using the wire-network molding technique,” *Journal of Biomedical Materials Research Part B-Applied Biomaterials*, Vol. 105, pp. 2315-2325, 2017. (SCIE, co-corresponding author, IF=3.4, Rank by JIF: Top 44.8%)
30. B.-S. Kim, S.-S. Yang, H. Park, S.-H. Lee, Y.-S. Cho, and J. Lee, “Improvement of mechanical strength and osteogenic potential of calcium sulfate-based hydroxyapatite 3-dimensional printed scaffolds by epsilon-polycarbonate coating,” *Journal of Biomaterials Science-Polymer Edition*, Vol. 28, pp. 1256-1270, 2017. (SCIE, co-author, IF=3.6, Rank by JIF: Top 36.7%)
29. S.-H. Lee, Y. S. Cho, M. W. Hong, B.-K. Lee, Y. Park, S.-H. Park, Y. Y. Kim, and Y.-S. Cho, “Mechanical properties and cell-culture characteristics of a polycaprolactone kagome-structure scaffold fabricated by a precision extruding deposition system,” *Biomedical Materials*, Vol.12, article number 055003,2017. (SCIE, co-corresponding author, IF=3.7, Rank by JIF: Top 40.7%)
28. K.-J. Kim, S. Choi, Y. S. Cho, S.-J. Yang, Y.-S. Cho, Kee K. Kim, “Magnesium ions enhance infiltration of osteoblasts in scaffolds via increasing cell motility,” *Journal of Materials Science-Materials in Medicine*, Vol. 28, article number 96, 2017. (SCIE, co-corresponding author, IF=4.5, Rank by JIF: Top 30.2%)
27. K. M. Song and Y.-S. Cho, “A parametric study of the confined spraying distance, solution concentration, and spraying time for the spraying technique used to fabricate PS superhydrophobic surfaces,” *Journal of Mechanical Science and Technology*, Vol. 29, No. 12, pp. 5335-5343, 2015 (SCIE, corresponding author, IF=1.7, Rank by JIF: Top 64.6%)
26. K. M. S., S. H. Ahn, and Y.-S. Cho, “Fabrication of a Hierarchical Aluminum Oxide Surface with Micro/Nanostructures via a Single Process and Its Application as a Superhydrophobic Surface: Simple Sintering Method with an Aluminum Microsized Powder,” *Surface & Coatings Technology*, Vol. 282, pp. 68-77, 2015. (SCIE, corresponding author, IF=6.1, Rank by JIF: Top 18.7%)
25. Dong Guk Sohn, Myoung Wha Hong, Young Yul Kim and Young-Sam Cho, “Fabrication of dual-pore scaffolds using a combination of WNM (wire-networked molding) and NIPS (non-solvent induced phase separation) techniques,” *Journal of Bionic Engineering*, Vol. 12, pp. 565-574, 2015 (SCIE, co-corresponding author, IF=5.8, Rank by JIF: Top 8.1%)
24. A R. Jo, M. W. Hong, Y. S. Cho, K. M. Song, J. H. Lee, D. Sohn, Y.-Y. Kim, and Y.-S. Cho, “Assessment of cell proliferation in knitting scaffolds with respect to pore-size heterogeneity, surface wettability, and surface roughness,” *Journal of Applied Polymer Science*, Vol. 132,

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