

# CURRICULUM VITAE

## Sungrok Wang

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**Position:** Postdoctoral researcher

**Research interests:** (1) 3D cell culture platform (2) Bioelectronic modulation of cellular behavior (3) Nano/microfiber fabrication

**Skill sets:** primary culture of hippocampal neuron/cardiac cells, immunostaining, confocal imaging, electrospinning

### Education:

2015 – 2024, Ph.D. Materials Science and Engineering, Gwangju Institute of Science and Technology, Gwangju, Korea

2011 – 2015 B.S. Materials Science and Engineering, Life Science (multiple majors), Hanyang University, Seoul, Korea

### Publications:

1. Wooju Jeong+, Sungrok Wang+, Yumin Kim, Soohyun Lee, Minhu Huang, Jaeil Park, Myung-Han Yoon, Chang-Myung Oh, Cheol Ryong Ku, “Hydrogel-Fiber-Mesh-Based 3D Cell Cultures: A New Method for Studying Pituitary Tumors”, *Smart Materials in Medicine*, 2024 (equally contributed).
2. Dong-Hee Kang+, Sungrok Wang+, MeeiChyn Goh+, Won-June Lee, Young Kim, M. Rahman, Giyoong Tae, and Myung-Han Yoon, “Superabsorbent Hydrogels with Predefined Nano/Microscale Geometry and Controlled Swelling Properties for Versatile 3D Cell Culture Scaffolds”, *ACS Applied Materials & Interface*, 2024 (equally contributed).
3. Sungrok Wang+, Kiyoon Min+, Jongwon Lee, Young Kim, Hyeonjun Na, Amy Kyaw, Giyoong Tae, Myung-Han Yoon, “Sulfated Gelatin Hydrogel Fibers for Mimicking Extracellular Matrices with Facile Cell Harvesting and Tailored Bioactivities”, *Manuscript in preparation*.
4. Sungrok Wang+, Dae Yong Hyun+, Dae Sung Park, Jaeil Park, Sangwoo Lee, Dong-Mi Heo, Kiyoon Min, Munki Kim, Jaeun Kim, Yu Jeong Jin, Mi Hyang Na, Kyung Hoon Cho, Doo Sun Sim, Giyoong Tae, Myung Ho Jeong, Myung-Han Yoon, “Optimized Electrospinnability and Chemical Crosslinking of Nanofiber Membranes with High-content Hyaluronic Acid for Anti-coagulant Application”, *Fibers and Polymers*, 2023 (equally contributed).
5. Dong-Hee Kang+, Jun-Gyu Choi+, Won-June Lee, Dongmi Heo, Sungrok Wang, Sungjun Park\*, Myung-Han Yoon, “Aqueous electrolyte-gated solution-processed metal oxide transistors for direct cellular interfaces”, *APL Bioengineering*, 2023.

6. M. Hoquea+, M. Alama+, Sungrok Wang±, J. Zaman+, M. Rahman+, M. Johir, Limei Tian, Jun-Gyu Choi, M. Ahmed, Myung-Han Yoon, “Interaction Chemistry of Functional Groups in Natural Polymeric Biomaterials for Hydrogel Design”, *Materials Science & Engineering, R: Reports*, 2023 (equally contributed).
7. Ho Yeon Nam, Jieun Choi, S. Dinesh Kumar, Josefine Eilsø Nielsen, Minkyu Kyeong, Sungrok Wang, Dahyun Kang, Yunjee Lee, Jiyoun Lee, Myung-Han Yoon, Sukwon Hong, Reidar Lund, Håvard Jenssen, Song Yub Shin\*, and Jiwon Seo\*, “Helicity Modulation Improves the Selectivity of Antimicrobial Peptoids”, *ACS Infectious Diseases*, 2020.
8. M. Obaid, N. Ghaffour, Sungrok Wang, Myung-Han Yoon and Insu Kim, “Zirconia nanofibers incorporated polysulfone nanocomposite membrane: Towards overcoming the permeance-selectivity trade-off”, *Separation and Purification Technology*, 2020.
9. Dong-Hee Kang, Dongyoon Kim, Sungrok Wang, Dasom Song, Myung-Han Yoon, “Water-insoluble, nanocrystalline, and hydrogel fibrillar scaffolds for biomedical applications”, *Polymer Journal*, 2018.
10. M. Obaid, Yesol Kang, Sungrok Wang, Myung-Han Yoon, Chang-Min Kim, Jun-ho Song and In Su Kim., “Fabrication of highly permeable thin-film nanocomposite forward osmosis membranes via the design of novel freestanding robust nanofiber substrates”, *Journal of Materials Chemistry A*, 2018.

**Patents:**

1. Sungrok Wang and Myung-Han Yoon, “Hydrogel containing polymer nanofiber having sulfate group introduced and method for preparing the same”, Korean Patent (KR102412836B1) and US Patent (US20220040382A1), 2022
2. In-Chan Kwon, Ko-Eul Park, Myung-Han Yoon, Sungrok Wang, Heung-Cho Ko, Heeje, Kim, Seonggwang Yoo, “Adhesive Attaching to skin and makeup material using the same”, Korean Patent (KR102028682B1), 2019