

CURRICULUM VITAE

김태일 (Tae-il Kim Ph.D)

PERSONAL INFORMATION

Name: Tae-il Kim
Date of Birth: November 17, 1977
Nationality: Republic of Korea
Office address: 2066, Seoburo, Sungkyunkwan University (SKKU) Rm
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Marital status: Married



EDUCATION

Doctor of Philosophy (March 2003 ~ February 2009)

School of Chemical and Biological Engineering, Seoul National University

Advisor: **Prof. Hong H. Lee**

Thesis: Facile Fabrication of Bio-Inspired Nanostructures and Their Application

Bachelor of Science (March 1997 ~ February 2003)

School of Chemical and Biological Engineering, Sungkyunkwan University (SKKU)

: Exc. Military service (February 1998 ~ March 2000)

EXPERIENCE

2023.3- present	Vice dean, College of Engineering, Sungkyunkwan University, Suwon, Korea
2023.3- present	Professor, School of Chemical Engineering, Sungkyunkwan University, Suwon, Korea
2019. 3-2020.2	Visiting Professor, School of Chemical Engineering, North Carolina State University, Raleigh, USA (Prof. Michael Dickey's group)
2017. 3-2023.2	Associate Professor, School of Chemical Engineering, Sungkyunkwan University, Suwon, Korea
2017. 3 -2018.2	Adjunct Professor, Graduate School of Human ICT Convergence, Sungkyunkwan University, Suwon
2015. 3 –present	Adjunct Professor, Department of Biomedical Engineering, Sungkyunkwan University, Suwon, Korea
2013. 3 - 2017.2	Assistant Professor, School of Chemical Engineering, Sungkyunkwan University, Suwon, Korea
2009. 6 - 2013.1	Postdoctoral Researcher, Material Science and Engineering, University of Illinois at

2009. 3 - 2009. 5 Urbana-Champaign, USA (Advisor: **Prof. John A. Rogers**)
 BK-21 Postdoctoral Researcher, School of Mechanical & Aerospace Engineering,
 Seoul National University, Korea (Advisor: prof. Kahp Y. Suh)
 2003. 3 - 2003.8 Assistant Researcher, "Electron Beam Lithography (LION-LV1)"
 Inter-university Semiconductor Research Center (ISRC), Seoul National University,
 Korea

RESEARCH INTERESTS

- Nanoscale patterning using unconventional lithography
- Interface (controllable wetting and spreading)
- Bio-integrated Electronics; brain injectable devices for wireless optogenetics
- Flexible electronics formed by inorganic microscale devices; GaN LED, silicon transistor
- Biomimetics based on nanofabrication; dry adhesive, superhydrophobic surface, nanoscale Velcro
- Bio-inspired electronics

Selected PUBLICATIONS (* corresponding author, # equal contribution)

Science

- Byeonghak Park, J.H. Shin, J. Ok, S. Park, W. Jung, C. Jeong, S. Choy, Y.I. Jo, and **Tae-il Kim***, "Cuticular pad-inspired selective frequency damper for nearly dynamic noise-free bioelectronics", **Science** 376, 6593, 624-620 (May 2022)

- **Tae-il Kim**[†], J.G. McCall[†], Y.H. Jung, X. Huang, E. R. Siuda, Y. Li, J. Song, Y.M. Song, H.A. Pao, R. -H. Kim, Lu, S. D. Lee, I.-S. Song, G.C. Shin, R. Al-Hassani, S. Kim, M.P. Tan, Y. Huang, F.G. Omenetto, John.A. Rogers, M.R. Bruchas, "Injectable cellular scale optoelectronics with applications for wireless optogenetics" **Science** 340, 211-216 (Apr 2013)

nature

- D. Kang, P.V. Pikhitsa, Y.W. Choi, C. Lee, S.S. Shin, L. Piao, B. Park, K.-Y. Suh, **Tae-il Kim***, M. Choi, "Ultrasensitive mechanical crack-based sensor inspired by the spider sensory system" **Nature** 516, 222-226 (Dec 2014)

- Ki Yoon Kwon[†], S. Cheeseman[†], A. Frias-De-Diego, H. Hong, J. Yang, W. Jung, H. Yin, B.J. Murdoch, F. Scholle, N. Crook, E. Crisci, M.D. Dickey*, V.K. Truong*, and **Tae-il Kim***, "A liquid metal mediated-metal coating for antimicrobial and antiviral fabrics", **Adv. Mater.** 33 (45), 2104298 (Nov 2021) [impact factor 30.849] [[Link](#)]

- Ju Seung Lee, S.J. Kang, J.H. Shin, Y.J. Shin, B. Lee, J.-M. Koo, and **Tae-il Kim*** "Nanoscale dewetting based direct interconnection of microelectronics for a deterministic assembly of transfer printing" **Adv. Mater.** 32 (21) 1908422 (May 2020) [impact factor 25.809] highlighted as a coverart [[Link](#)]

- Yei Hwan Jung, J.U. Kim, J.S. Lee, J.H. Shin, W. Jung, J. Ok, and **Tae-il Kim***, "Injectable biomedical electronics for sensing and stimulating internal body organs" **Adv. Mater.** 32 (16) 1907478 (Apr 2020) [impact factor 25.809] highlighted as a frontispiece_ [\[Link\]](#)
- Chanho Jeong, J.S. Lee, B. Park, C.S. Hong, J.U. Kim and **Tae-il Kim***, "Controllable Configuration of Sensing Band in a Pressure-Sensor by Lenticular Pattern Deformation on Designated Electrodes", **Adv. Mater.** 31,(36), 1902689 (Sep 2019) [impact factor 25.809] [\[Link\]](#)
- Sung Hyuk Sunwoo, J.S. Lee, S.J. Bae, Y.J. Shin, C.S. Kim, S.Y. Ju, H.S. Choi, M. Suh, S.W. Kim, Y.J. Choi, and **Tae-il Kim***, "Chronic and acute stress monitoring by electrophysiological signal from adrenal gland" **Proc. Natl. Acad. Sci. USA** 116 (4) 1146-1151 (Jan 2019) [impact factor 9.661]
- Yei Hwan Jung, B. Park, J.U. Kim, and **Tae-il Kim***, "Bioinspired Electronics for artificial sensory systems" **Adv. Mater.** 31 (34) 183637 (Aug 2019) [impact factor 25.809]
- Sori Lee†, G. Hwang†, T.H. Kim†, S.J. Kwon, J.U. Kim, K. Koh, B. Park, H. Hong, K.J. Yu, H. Chae, Y. Jung*, J. Lee*, and **Tae-il Kim***, "On-demand drug release from gold nanoturf for a thermo- and chemotherapeutic esophageal stent (TES)" **ACS Nano**. 12 (7), 6756-6766 (Jul 2018) [impact factor 13.709] [\[Link\]](#)
- B.H. Park†, J.S. Kim†, D. Kang, C. Jeong, K. Kim, J.U. Kim, P.J. Yoo, and **Tae-il Kim***, "[Dramatically Enhanced Mechanosensitivity and Signal-to-Noise-Ratio on Nanoscale Crack based Sensors: Effect of Depth](#)" **Adv. Mater.** 28 (37) 8130-8137 (Oct 2016) [impact factor 18.90]
- **Tae-il Kim**, H. E. Jeong, K. Y. Suh, and H. H. Lee "[Stooped Nanohairs: Geometry controllable, reversible, unidirectional and robust gecko-like dry adhesive](#)" **Adv. Mater.** 21 (22) 2276-2281 (Jun 12 2009) [selected as a [inside cover](#)] [impact factor 10.857]

Full publications are shown in the below link

<https://sites.google.com/site/taeilkimslab/4-cover-gallery-selected-publications?authuser=0>