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(a) Professional Preparation

Seoul National University	South Korea	Physics	B.S. - 1999
Seoul National University	South Korea	Physics	M.S. - 2001
Brown University	Providence, RI	Physics	Ph.D. -2010
Yale University	New Haven, CT	Molecular Biophysics	Postdoc, 2010-2015

(b) Appointments

2022-Present	Associate professor, Department of Physics and NanoScience Technology Center (NSTC) Secondary joint appointment, Department of Materials Science and Engineering (MSE) Graduate faculty, Burnett School of Biomedical Sciences (BSBS) University of Central Florida (UCF), Orlando, FL
2015-2022	Assistant professor, Department of Physics and NanoScience Technology Center
2010-2015	Postdoctoral Research Associate, Yale University, New Haven, CT

(c) Publications

(i) Publications most current related to the field

1. B. Demosthene, M. Lee P, R. Marracino, J. B. Heidings, **E.H. Kang***. Molecular basis for actin polymerization kinetics modulated by solutions crowding. *Biomolecules*. 13(5), 786
2. J. Park, P. Kravchuk, A. Krishnaprasad, T. Roy, **E. H. Kang***. (2022) Graphene enhances actin filament assembly kinetics and modulates NIH-3T3 fibroblast cell spreading. *International Journal of Molecular Sciences*, 23 (1), 509
3. N. Castaneda, C. Feuillie, Michael Molinari*, **E.H. Kang***. (2021) Actin Bundle Nanomechanics and Organization are Modulated by Macromolecular Crowding and Electrostatic Interactions. *Frontiers in Molecular Biosciences, section Biophysics*. 8:760950. doi: 10.3389/fmolb.2021.760950
4. **N. Castaneda^G, J. Park^G, E.H. Kang***. (2021) Regulation of actin bundle mechanics and structure by intracellular environmental factors. *Frontiers in Physics- section Biophysics*. 9, 675885. doi: 10.3389/fphy.2021.675885.
5. J. Park, M. Lee, B. Lee, N. Castaneda, L. Tetard, **E. H. Kang***. (2021) Crowding tunes the organization and mechanics of actin bundles formed by crosslinking proteins. *FEBS Letters*, 595 (1), 26-40. doi:10.1002/1873-3468.13949 (*Highlighted as a featured article*)

(ii) Other significant products

1. N. Castaneda, M. Lee, H. J. Rivera-Jacquez, R. R. Marracino, T. R. Merlino, **H. Kang***. (2019) Actin filament mechanics and structure in crowded environments. *Journal of Physical Chemistry B*, 123 (13):2770-2779

2. H. Li, T-J. Ko, M. Lee^P, H. Chung, S. S. Han, K. H. Oh, A. Sadmani, **H. Kang**, Y. Jung. (2019) Experimental realization of few layer 2D MoS2 membranes of near atomic thickness for high efficiency water desalination. *Nano Letters*, 19(8), 5194-5204. doi: 10.1021/acs.nanolett.9b01577
3. M. Lee, **E. H. Kang***. (2019) Molecular dynamics study of interactions between polymorphic actin filaments and gelsolin segment-1. *PROTEINS: Structure, Function, and Bioinformatics*, 88 (2), 385-392. doi: 10.1002/prot.25813
4. A. M. Diaz, Z. Zhang, B. Lee, F. M. Hernandez Luna, Y. Y. Li Sip, X. Lu, J. Heidings, L. Tetard, L. Zhai, **H. Kang***. (2018) Direct Evaluation of Single Hydrogel Nanofiber Mechanics Using Persistence Length Analysis. *ACS Omega*, 3(12):18304-18310
5. N. Castaneda, T. Zheng, H. J. Rivera-Jacquez, H. J. Lee, J. Hyun, A. Balaeff, Q. Huo, **H. Kang***. (2018) Cations modulate actin bundle mechanics, assembly dynamics, and structure. *Journal of Physical Chemistry B*, 122(14):3826-3835

(d) Graduate teaching experience

- **Principles and Techniques of Nanobiology (IDS6257):** Elective course in Nanotechnology MS program (SP 2016-SP 2023, taught every spring semester)
- **Introduction to Nanoscience and Nanotechnology (IDS6250):** Graduate core course in Nanotechnology MS program. Co-taught with Dr. Laurene Tetard. FA 2016 and FA 2017

(e) Graduate students mentored (to completion, if applicable)

- Chair of thesis/dissertation committees (2 PhD, 7 MS students graduated)

*5 most recent completed

Name of Student	Degree	Department/Program	Graduation Year
Pavlo Kravchuk	MS	Nanotechnology	Summer 2022
Jinho Park	PhD	MSE	Fall 2021
Nicholas Castaneda	PhD	BSBS	Summer 2021
Bryan Demosthene	MS	Nanotechnology	Summer 2021
Claire Toland	MS	Nanotechnology	Summer 2021

- Member of thesis/dissertation committees

*5 most recent

Student Name	Degree	Department/Program	Graduation Year
Charles Didier	PhD	BSBS	2022
Jingwen Wu	PhD	Mechanical Engineering	2022
Arianna Dicce	MS	MSE	2022
Sang Lee	MS	Nanotechnology	2022
Benjamin Croop	PhD	CREOL	2021

- List total number of graduate students mentored on thesis/dissertation committees over the course of your career: 36 graduate students total

(f) Synergistic Activities

- National Science Foundation BMMB Panel Reviewer (2020 and 2022)

- I served as Treasury Secretary for Association of Korean Physicists in America (AKPA) between 2021 and 2023 and got elected as Vice President (2023-Present); President of Korean Scientists and Engineers Association (KSEA) Orlando Chapter.
- Organizing committee, NanoFlorida International Conference (2023) at UCF.
- Co-organized “Teacher Workshop: Introduction to Nanoscience” at Orlando Library to introduce the concepts of bio-nanoscience to local high school teachers for STEM.
- Mentored National Science Foundation Research Experience for Undergraduates (REU) summer internship students (2017-2022)