

# NANO KOREA 2019

## July 3~5, KINTEX, Korea

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### Ki Tae Nam

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### *EDUCATION*

Massachusetts Institute of Technology	Ph.D.	Materials Science & Engineering	2007
Seoul National University	M.S.	Materials Science & Engineering	2002
Seoul National University	B.S.	Materials Science & Engineering	2000

### *PROFESSIONAL ACTIVITIES*

- Director, Nano Systems Institute, Seoul National University, Korea (2017 to Present.)
- Associate Professor, Seoul National University, Korea (2014 to Present.)
- Assistant Professor, Seoul National University, Korea (2010 to 2014.)
- Postdoctoral Fellow, The Molecular Foundry, Lawrence Berkeley National Laboratory, Berkeley, CA (2007 to 2010.7.)

### *AWARD AND HONORS*

- Selected as “Ten major nanotechnologies in 2018” (Ministry of Science and ICT), 2018
- “2017 Young Scientist Award (**Presidential award**)” from Korean President, 2017
- National Research and Development Top 100 Excellency Award, 2017
- Selected as “Ten Leading Young Scientists” (Korean Academy of Science and Technology and YTN Science), 2017
- Excellent paper award in XAFS field (KOSUA), 2017
- 21<sup>st</sup> Samsung Humantech Paper award (Energy & Environment, Samsung Electronics), 2015
- 20<sup>th</sup> Young Scientist Award (The Korean Institute of Metals and Materials), 2015
- Young Scientist Award, Environmental Energy Division, The Korean Chemical Society, 2014
- Pioneering Scientist Award (Korean Academy of Science and Technology), 2011
- Martin Family Society of Fellows for Sustainability (MIT Environmental Solution Initiative, 2005)
- Outstanding Ph.D thesis award (MIT, 2006)

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### **MAIN SCIENTIFIC PUBLICATION**

- “Amino-Acid- and Peptide-Directed Synthesis of Chiral Plasmonic Gold Nanoparticles,” *Nature*. 2018, 556, 360.
- “Defining a Materials Database to Design Copper Binary Alloy Catalysts for Electrochemical CO<sub>2</sub> Conversion,” *Advanced Materials*. 2018, 30, 1404717.
- “Mechanistic Investigation of Water Oxidation Catalyzed by Uniform, Assembled MnO Nanoparticles,” *J. Am. Chem. Soc.* 2017, 139 (6), 2277.
- “Photocatalytic Hydrogen Generation from Hydriodic Acid Using Methylammonium Lead Iodide in Dynamic Equilibrium with Aqueous Solution,” *Nature Energy*. 2016, 2, 16185.
- “N-doped Graphene Quantum Sheets on Silicon Nanowire Photocathodes for Hydrogen Production,” *Energy Environ. Sci.* 2015, 8, 1329.
- “Coordination Tuning of Cobalt Phosphates Toward Efficient Water Oxidation Catalyst,” *Nature Communications*. 2015, 6, 8253.
- “Tyrosine Mediated Two dimensional Peptide Assembly and Its Role as a Bio-Inspired Catalytic Scaffold.” *Nature Communications*. 2014, 5, 3665.
- “Free Floating Ultra Thin Two Dimensional Crystals from Sequence Specific Peptoid Polymers,” *Nature Materials*. 2010, 9, 454.
- “Virus Enabled Synthesis and Assembly of Nanowires for Lithium Ion Battery Electrodes,” *Science*. 2006, 312, 885.
- “Spontaneous Assembly of Viruses on Multilayered Polymer Surfaces,” *Nature Materials*. 2006, 5, 234.

### **RESEARCH INTERESTS**

- Bio-inspired Nanomaterials
  - Protein-like Inorganic Materials
  - Peptide Nanomaterials
- Artificial Photosynthesis
  - Water Oxidation
  - CO<sub>2</sub> reduction