

Ki-Hyun Kim

Professor Ki-Hyun Kim. The World's Top 1% Researcher Builds a Scientific Basis for Ultimate Air Quality Improvement



Affiliation: Department of Civil and Environmental Engineering

- 2019 [연구우수교수](#)

□

Contents

- [1 Profile](#)
 - [1.1 Careers after Ph. D.](#)
 - [1.2 Education \(Academic Career\)](#)
 - [1.3 Awards and Careers](#)
- [2 Research Topics](#)
- [3 Papers](#)
- [4 Industry-Academia Collaboration](#)
- [5 Patents](#)
- [6 Contact Information](#)

Profile

Careers after Ph. D.

- 2018 ~ present Honorary Scholar Professor at Hanyang University
- 2014 ~ present Professor at Hanyang University Department of Civil and Environmental Engineering
- 2007 ~ 2014 Professor at Sejong University Department of Environment, Energy & Geoinformatics
- 2002 ~ 2007 Associate Professor at Sejong University Department of Environment, Energy & Geoinformatics
- 1999 ~ 2002 Assistant Professor at Sejong University Department of Environment, Energy & Geoinformatics

Education (Academic Career)

- 1988 ~ 1992 Doctoral course of Biological Oceanography / Atmospheric Environmental Chemistry at the University of South Florida
- 1984 ~ 1986 Master's course of Biological Oceanography / Atmospheric Environmental Chemistry at the University of South Florida
- 1980 ~ 1984 Studied and graduated at Hanyang University College of Engineering Department of Earth Resources

Awards and Careers

- 2019 Highly Cited Researcher (HCR) 2019
- 2018 Member of the Korean Academy of Science and Technology
- 2018 Paiknam Erudite Scholar Award
- 2018 Scientific Technician of the Month (Ministry of Education)
- 2018 Environment International - Author of the Most (No. 1) Cited Article
- 2006 Selected as '10 National Erudite Scholars' by the Ministry of Education
- 2003 Selected as Outstanding Research Task by Korea Science and Engineering Foundation
- 2003 Best Academic Paper Award by the Korean Foundation of Science and Technology Societies
- 2002 Academic Award by the Korean Society for Atmospheric Environment
- 2001 Selected as World Leading Scientist by the Korea Science and Engineering Foundation

Research Topics

Prof. Ki-Hyun Kim has been working on the following R & D areas:

- Development and establishment of sensing/detection methods for environmental/biomedical targets (VOCs and heavy metals) along with the establishment of basic QA for those pollutants.
- Development and performance evaluation of diverse functional materials for environmental/energy/biological applications.
- Techniques for purification of air and for remediation of environmental pollutants with novel advanced functional materials like metal-organic frameworks (MOFs).

Papers

Prof Kim published more than 550 peer-review SCI journal articles with more than 85% as the corresponding (or first) author

- "Coordination polymers: Opportunities and challenges for monitoring volatile organic compounds", Progress in Polymer Science, 2015
<https://www.sciencedirect.com/science/article/pii/S007967001500009X>
- "Recent advances in enzyme immobilization techniques: metal-organic frameworks as novel substrates", Coordination Chemistry Reviews, 2016
<https://www.sciencedirect.com/science/article/pii/S0010854516301023>

- “Functional hybrid nanostructure materials: Advanced strategies for sensing applications toward volatile organic compounds”, Coordination Chemistry Reviews, 2017
<https://www.sciencedirect.com/science/article/pii/S0010854517301078>
- “Nanostructured materials: A progressive assessment and future direction for energy device applications”, Coordination Chemistry Reviews, 2017
<https://www.sciencedirect.com/science/article/pii/S0010854517302217>
- “Metal-organic frameworks as media for the catalytic degradation of chemical warfare agents”, Coordination Chemistry Reviews, 2017
<https://www.sciencedirect.com/science/article/pii/S0010854517303429>
- “Metal-organic frameworks: Challenges and opportunities for ion-exchange/sorption applications”, Progress in Materials Science, 2017
<https://www.sciencedirect.com/science/article/pii/S0079642517300026>
- “Carbon nanotubes: A novel material for multifaceted applications in human healthcare”, Chemical Society Reviews, 2017
<https://pubs.rsc.org/no/content/articlehtml/2017/cs/c6cs00517a>
- “Towards high-efficiency sorptive capture of radionuclides in solution and gas”, Progress in Materials Science, 2018
<https://www.sciencedirect.com/science/article/pii/S0079642518300021>
- “Recent advances and remaining challenges for polymeric nanocomposites in healthcare applications”, Progress in Polymer Science, 2018
<https://www.sciencedirect.com/science/article/pii/S0079670017301806>
- “Carbon nanotubes: A potential material for energy conversion and storage”, Progress in Energy and Combustion Science, 2018
<https://www.sciencedirect.com/science/article/pii/S0360128517301132>

Industry-Academia Collaboration

- Industry Research / Yuhan-Kimberly Gimcheon Factory / Odor and Dilution Drain Analysis / September 2019 ~ December 2019
- Industry Research / Yangyang Livestock Farming Union / A Study on the Odor of Pigsty / July 2019 ~ August 2019
- Industry Research / Posco / A Study on the Stability of Hydrogen Sulfide in NaSH Neutralized Wastewater / February 2019 ~ April 2019
- Industry Research / SBS / An Analysis of Odor and Hazardous Gas / January 2019 ~ June 2019
- Industry Research / AliveZ / Aroma Analysis Service / July 2018 ~ July 2018
- Industry Research / Samsung Electronics / Deodorant / Development of Performance Prediction Tool for the Evaluation of Structural Self-Transferment and Filter Structure/Material / April 2018 ~ September 2018

Patents

- System for analyzing VFA in air and method of analyzing VFA using the same
<https://patents.google.com/patent/KR101583542B1/en>
- Automatic collection apparatus and method of electronic cigarette smoke
<https://patents.google.com/patent/KR101708264B1/en?q=KR101708264B1>

Contact Information

- 연구실 URL : <http://environment.cafe24.com/>
- E-mail : kkim61@hanyang.ac.kr (or kkim61@nate.com)