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# **Arkansas nanotech researcher Jin-Woo Kim named IEEE fellow**

By John Lovett

U of A System Division of Agriculture

## Fast facts

* Honor bestowed for contributions to nanoscale fabrication of bio/nano-hybrid materials
* Dr. Kim has been director of the Bio/Nano Technology Group at the University of Arkansas since 2001

(765 words)

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FAYETTEVILLE, Ark. — Jin-Woo Kim, a professor and researcher with the Arkansas Agricultural Experiment Station, was inducted as a fellow of the [Institute of Electrical and Electronics Engineers](https://www.ieee.org/) on Jan. 1 for his contributions to nanotechnology.

A professor of biological and agricultural engineering for the experiment station, the research arm of the University of Arkansas System Division of Agriculture, and the University of Arkansas College of Engineering, Kim has devoted much of his career to developing advanced nanoparticle systems into practical tools for medical, agricultural and manufacturing uses.

IEEE elevated Kim to IEEE fellow status for his contributions to nanoscale fabrication of bio/nano-hybrid materials. The IEEE is a professional organization for the advancement of technology with more than 400,000 members in over 160 countries. Only about 5,000 members have been named IEEE fellows. Kim was among 311 senior members bestowed with the honor in 2022.

“We congratulate Dr. Kim for his induction as fellow of IEEE,” said Jean-François Meullenet, senior associate vice president for agriculture-research and director of the Arkansas Agricultural Experiment Station. “We know this is a very special honor for him and a great recognition for his breakthrough work in nanoscience. Well deserved.”

“It is a prestigious honor and an important career achievement,” said Lalit Verma, head of the Department of Biological and Agricultural engineering. “Dr. Kim’s research and development work and innovative technology will enhance the economic well-being and quality of life in Arkansas and the world.”

Kim’s contributions to nanotechnology have helped develop a [method to treat cancer](https://news.uams.edu/2009/11/17/nanotechnology-team-captures-tumor-cells-in-bloodstream/) in collaboration with the University of Arkansas for Medical Sciences.

“I have found him to always be an innovative, deep thinker and someone with a special ability to think across disciplines as he collaborates on exciting work related to our cancer detection and drug delivery interests,” said Robert J. Griffin, Ph.D., of the UAMS Department of Orthopedic Surgery. “His work on DNA-based nanoparticles was particularly fascinating as he was able to ingeniously use the natural properties of DNA to create multi-functional nanomaterials with exciting potential.”

Verma said Kim’s work with nanoparticles has the potential to transform many fields of research, ranging from optoelectronics, nanophotonics, and nanomedicine to agriculture, food safety and biosecurity. Kim has been developing innovative technology to guide the self-assembly of nanoparticles into specific shapes and functions that he calls “nano-toolbox technology.” He has also used the technology to investigate the applications of [nanocellulose created from timber industry waste](https://www.uaex.uada.edu/media-resources/news/2019/november2019/1010_Division_engineer_developing_nano_toobox.aspx).

Kim serves as a co-founder and a scientific advisory board member to CelluDot LLC, a Fayetteville start-up company working to turn nanocellulose into materials that can be used for a variety of uses including agricultural adjuvants, medical diagnosis agents, smart fabrics, packing materials and filters.

“Perhaps the highest form of recognition is one received from your peers,” said Kim LaScola Needy, dean of the College of Engineering and professor of industrial engineering. “Fellow status in IEEE is extremely competitive and reserved for those who have advanced their profession in a significant way. I am so pleased to see that Dr. Kim has received this much deserved recognition for his important work.”

Steve Tung, professor and graduate coordinator for the Department of Mechanical Engineering, also gave his congratulations to Kim on the award.

“In the last two decades, he has contributed greatly to our understanding of bio-nanotechnology, and also provided a strong leadership role in his service for the IEEE Nanotechnology Council,” Tung said.

Kim has been a member of the IEEE since 1998 when he was pursuing his doctorate in biological and agricultural engineering at Texas A&M University. He has been director of the Bio/Nano Technology Group at the University of Arkansas since 2001 and served in many key leadership roles with the IEEE over the years, including vice president for publications and vice president for conferences of the IEEE Nanotechnology Council, as well as the co-editor-in-chief of the IEEE Open Journal of Nanotechnology, IEEE’s rapid and open-access journal.

“I am humbled and thankful for the recognition,” said Kim. “It feels truly amazing to have my work recognized, but it would not be possible without the support and motivation from many people during my career – I am grateful to all!”

“The IEEE Fellow is one of the most prestigious honors of the IEEE and is bestowed upon a very limited number of senior members who have contributed importantly to the advancement or application of engineering, science and technology bringing significant value to our society,” Susan K. Land, outgoing IEEE president and CEO, said.

To learn more about Division of Agriculture research, visit the Arkansas Agricultural Experiment Station website: [https://aaes.uada.edu/](https://nam11.safelinks.protection.outlook.com/?url=https%3A%2F%2Faaes.uada.edu%2F&data=04%7C01%7Cfmiller%40uark.edu%7C5cd2aea2b12c4dfceb9c08d942da0e9d%7C79c742c4e61c4fa5be89a3cb566a80d1%7C0%7C0%7C637614326581623988%7CUnknown%7CTWFpbGZsb3d8eyJWIjoiMC4wLjAwMDAiLCJQIjoiV2luMzIiLCJBTiI6Ik1haWwiLCJXVCI6Mn0%3D%7C1000&sdata=aepGh27NgEgSYv9mb8nggzA%2BaUdOhXMw7e6sspVov8c%3D&reserved=0). Follow us on Twitter at [@ArkAgResearch](https://nam11.safelinks.protection.outlook.com/?url=https%3A%2F%2Ftwitter.com%2FArkAgResearch&data=04%7C01%7Cfmiller%40uark.edu%7C5cd2aea2b12c4dfceb9c08d942da0e9d%7C79c742c4e61c4fa5be89a3cb566a80d1%7C0%7C0%7C637614326581633943%7CUnknown%7CTWFpbGZsb3d8eyJWIjoiMC4wLjAwMDAiLCJQIjoiV2luMzIiLCJBTiI6Ik1haWwiLCJXVCI6Mn0%3D%7C1000&sdata=nH1djoLMIYNT7ERwtQMektp5RVjEjY1B93nJK%2BhyjJE%3D&reserved=0).

## About the Division of Agriculture

The University of Arkansas System Division of Agriculture’s mission is to strengthen agriculture, communities, and families by connecting trusted research to the adoption of best practices. Through the Agricultural Experiment Station and the Cooperative Extension Service, the Division of Agriculture conducts research and extension work within the nation’s historic land grant education system.

The Division of Agriculture is one of 20 entities within the University of Arkansas System. It has offices in all 75 counties in Arkansas and faculty on five system campuses.

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