JOINT SEMINAR

Functional Nanomaterials for Biomedical and Food Safety Applications

By

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Date: 19 Jun 2017 (Mon)
Time: 11:00am
Venue: Rm 2404, Lift 25-26

My research group’s research interests include synthesis and characterization of functional nanomaterials and their applications in energy, environmental, food safety and biomedical applications.

In this talk, I will briefly discuss our recent progress on synthesis of functional materials based on protein cages, graphene, and nanoflowers for biosensing, bioimaging and drug delivery. I will discuss the development of various biosensors based on DNA assays and immunoassays for point-of-care diagnostics and for cancer detection. Nanomaterials loaded with optical or electroactive signal molecules were used for signal amplification tags for enhanced sensitivity for detection of disease biomarkers and food pathogens. I will then discuss the functionalization of graphene based materials for bioimaging and gene delivery. Finally, I will discuss the recent results on microfluidic platform for studying the nanocarriers across the blood-brain-barrier for potential brain disease imaging and treatment.

Biosketch

Dr. Yuehe Lin is a professor in the Voiland College’s School of Mechanical and Materials Engineering and in the Paul G. Allen School for Global Animal Health. He also holds a joint appointment at Pacific Northwest National Laboratory (PNNL), conducts research in nanotechnology, particularly development of small-scale devices, materials and analytical systems for biomedical diagnosis, drug delivery and energy and environmental applications. Dr. Lin joined PNNL in 1997 first as a post-doctoral fellow and then as a full-time research scientist in 1998. He was promoted to Senior Research Scientist in 2000 and Chief Scientist in 2004. In 2008, Dr. Lin was named a Laboratory Fellow, the highest rank in DOE national laboratory system. He joined WSU in 2013.

His research has been funded by NIH, CDC, DOE, and DOD with a total budget over $22M for a total of 25 projects. His research has resulted in ~400 publications with a total citation about 36,000 and h-index 100. He was listed in Thomson Reuters’s highly-cited researchers in 2014, 2015 and 2016. Dr. Lin has over 10 patents. Half of the patents have been licensed to industrial partners for commercialization. He obtained three Battelle-PNNL Key Contributor Awards for technology commercialization. He is a fellow of AAAS, Royal Society of Chemistry, and American Institute of Medical and Biological Engineering. He received his B.S. degree from Peking University in 2004, Ph.D. in Chemistry from Xiamen University in 1991 and Ph.D. in environmental science from the University of Idaho in 1997.