NJIT New Jersey Institute of Technology

BME

Department of Biomedical Engineering
Graduate Seminar

Dr. Kagya Amoako, Ph.D.
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University of New Haven, CT

Subject: Development of Biofunctional Materials for Studying Biological Processes

Abstract:

The broader impact of materials now go beyond the static and bioinert goals in, for example, knee implants to the functional dynamism in tissue engineering scaffolds, DNA microarrays, Zwitterionic hydrogels for stem cell expansion, surface grafts which limit biofouling and capture-kill microorganism. However, even with significant contributions made in the field of functional materials, it remains crucial that the bio-activity of a variety of modified materials are spatially sensitive and be catalyzed by changes in the bulk material composition and also by the application of material-independent stimuli. Such spatial control over bio-activity could have powerful implications in multi-functional materials' conservation of biofunction, predictability of spatial activity, and other forms of material bio-activity modulation. Dr. is the PI of the Biomaterials and Medical Device Innovation laboratory (BMDiLab) and his talk will highlight BMDiLab research directions related to the above concepts.

Bio:

Dr. Kagya Amoako is a world renowned Professor of Biomedical Engineering and PI of the Biomaterials and Medical Device Innovation lab at the University Of New Haven, CT. His contribution to biomedical engineering education include the development of the biomedical engineering graduate program at the University of New Haven. His notable contribution thus far to biomedical engineering research is the pioneering of nitric oxide generating artificial lungs. He has authored several research papers published in highly ranked peer reviewed journals, a biomaterials book chapter, and have thousands of readership of his research work around the world. Dr. Amoako obtained a doctoral degree in biomedical engineering from the University of Michigan in 2011. He then went on to the University of Washington in Seattle USA for further training as a post-doctoral fellow in the department of chemical engineering. Dr. Amoako serves as a member of the BMES education committee, topic editor of Polymers journal, a reviewer for several journals including Advanced Materials Interfaces, Langmuir, Advance Healthcare Materials, Polymers, American Society for Artificial Internal Organs, etc. He also reviews national conference abstracts for the Society for Biomaterials and the Biomedical Engineering Society. Dr. Amoako has also made several media appearances on FOX News, NBC Connecticut, Reuters Health, Connecticut Post, The Pitt News, Travel Weekly, and iHeart Radio. Dr. Amoako's research work aims to develop biointeractive multi-functional biomaterials using conjugation, polymer surface and bulk modification, biologically active hydrogel development, and controlled release for discovery in biological systems and for the development of novel approaches to mediate processes at the cellular and sub-cellular levels.

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