



"Functional nanomaterials for targeted cancer chemotherapy"

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LECTURE: 9:00 AM - 10:00 AM

ENGINEERING CENTER
ROOM EC 1112
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Abstract:

Nanomaterials have shown great potential for numerous applications, ranging from energy harvesting to information technology and biomedical research. When biomolecules are introduced into nanomaterials, the corresponding conjugates show their advantages in bioanalytical and biomedical applications, such as biological imaging, drug delivery, and disease diagnosis, which are the focus of our research.

This lecture will outline our recent research on functional nanomaterials for targeted cancer chemotherapy. Part 1 is the study on DNA photocleavage of C60-porphyrin compound. Part 2 is the construction of smart aptamer-CaCO₃ nanostructure for targeted delivery of anticancer drugs.

Biography

Prof. Cuisong Zhou studied for her PhD in both Sichuan University and Institute of Chemistry Chinese Academy of Sciences (China) from 2003 to 2006. Currently she is an associate professor in the College of Chemistry, at Sichuan University. Dr Zhou's research has focused primarily on 1) the construction of nanomaterials with enlarged surface area and enhanced electron transfer efficiency to be used for high sensitive biosensor. 2) the study of biomolecular interactions on nanomaterial surface using spectra and electrochemistry technologies. 3) the development of novel and sensitive detection methods for biomolecules, drug molecules or heavy metal ions using nanomaterials and aptamers. Her research has been published in Analytical Chemistry, Chemical Communications, Analyst, Macromolecular Rapid Communications, Analytical & Bioanalytical Chemistry et. al. In recognition of her work, Dr. Zhou has received several Fund and awards including National Nature Science Foundation of China, Specialized Research Fund for the Doctoral Program of Education Ministry of China, Opening Fund of Key Laboratory of Chemical Biology and Traditional Chinese Medicine Research, Hunan Normal University and Youth Foundation of Sichuan University.

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