



学术报告



State Key Laboratory
of Chemical Resource Engineering

Development of Inorganic Nanoparticles for Cancer Therapy and Diagnosis

报告人: Prof. Zhi Ping (Gordon) Xu

The University of Queensland, Australia

时间: 2017年8月28日 (周一) 下午15:30-16:30

地点: 无机楼107会议室



报告人简介:

Dr. Xu obtained his B.S. degrees in 1988 and M.S. degree in 1991 at University of Science & Technology of China, and then completed his M.S. in 1997 and received his Ph.D. in 2001 at National University of Singapore. He continued to be a Postdoctoral Research Scientist at University of North Texas from 2001-2003. Since 2004, He has received a number of fellowships and awards, including an ARC Australian Postdoctoral Fellowship (2003-2007), ARC Australian Research Fellowship (2008-2012). Dr. Xu is an Australian Research Council (ARC) Future Fellow (2013-2016) and UQ VC Senior Research Fellow (2017-now). Prof. Xu and his colleagues has published almost 200 papers in high impact international journals and books, including Nature Plants, Nano Lett., J. Am. Chem. Soc., Angew. Chem. Int. Ed., ACS Nano, Adv. Funct. Mater., Biomaterials, Small, etc. He has been an associate editor of RSC Adv. and board members of other six journals. He has been invited as a referee by more than 20 international journals. His papers have been cited nearly 8000 times with the H-index of 47.

报告内容简介:

In this talk, he will first introduce two types of inorganic nanoparticles (NPs), i.e. layered double hydroxide (LDH) and lipid-coated calcium phosphate (LCP) NPs, and demonstrate their high potential as the drug/gene delivery vehicle. He will present a few examples to show efficient co-delivery of functional small interfering RNA (siRNA) and anti-cancer drug to cancer cells for the synergic inhibition. After that, he will present their recent research using clay NPs as vaccine adjuvants to promote higher and long-term immune responses against cancer and bacteria. They have noted that LDH is able to readily load model antigenovalbumin (OVA) and the toll-like receptor ligand CpG together, promote higher levels of specific antibodies, and modulate the immune response from Th2 bias towards the preferred polarity Th1 for anti-cancer purpose. They have found that LDH and hectorite (HEC) NPs as adjuvants to promote stronger even long-lasting immune responses against the infectious bacteria. Finally, he will demonstrate the capability of inorganic NPs as positron emission tomography (PET) and magnetic resonance imaging (MRI) contrast agents for cancer imaging and detection.

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