Chinese Academy of Sciences

Key Lab for Biomedical Effects of Nanomaterials and Nanosafety

中科院纳米生物效应与安全性重点实验室

Nanosafety Lab. CAS

学术报告通知

CAS NS Forum (NO. 290)

演讲者： **Prof. Paul S. Weiss**
University of California, Los Angeles

题　　目： **Nanotechnology Approaches to Biological Heterogeneity and Cellular Therapies**

时　　间： **2018 年 5 月 28 日 (星期一), 下午15:00**

地　　点： **国家纳米科学中心，南楼五层会议室**

邀请人： **国家纳米科学中心　　王琛　　研究员**
中国科学院化学研究所　毛兰群　　研究员

报告摘要:

The great promise of single-molecule/assembly measurements is to understand how critical variations in structure, conformation, and environment relate to and control function. New approaches to sensing, imaging, and analysis are keys to elucidating these associations. I will discuss current and upcoming advances and will pose the challenges that lie ahead in creating, developing, and applying new tools for biology and medicine. These advances include using biomolecular recognition in sensor arrays to probe dynamic chemistry in the brain and microbiome systems. It also includes fusing spectroscopic imaging modalities and freeing up bandwidth in measurements to record simultaneous data streams and to expand our dynamic range. Recent advances in sparsity and compressive sensing can be applied both to new analysis methods and to directing measurements so as to assemble and to converge structural and functional information. Early examples will be discussed.

个人简介：

Paul S. Weiss holds a UC Presidential Chair and is a distinguished professor of Department of Chemistry & Biochemistry, Materials Science & Engineering at UCLA. He received his B.S and M.S. degrees in chemistry from MIT in 1980 and his Ph.D. in chemistry from the University of California at Berkeley in 1986. He was a postdoctoral member of technical staff at AT&T Bell Laboratories from 1986-1988 and a visiting scientist at IBM Almaden Research Center from 1988-1989. Before coming to UCLA, he was a distinguished professor of Department of Chemistry and Physics at the Pennsylvania State University, where he began his academic career in 1989.

Two major themes in his interdisciplinary research group are cooperativity in functional molecules and single-molecule/assembly biological structural and functional measurements. He has written over 300 publications, holds over 30 patents, and has given over 700 invited, plenary, keynote, and named lectures.

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