凝聚态物理前沿论坛

第七十五讲

题　　目：Paper-Based Optofluidic Test Strips for Point-of-Care Diagnosis

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地　　点：固体所3号楼221会议室

报告摘要：Currently large-scale lab-based analytical instruments such as enzyme-linked immunosorbent assay (ELISA) are the gold standard method for measurement of biomarkers such as proteins in human fluids (saliva, urine and blood). This presentation will present the portable, disposal paper-based test strips for detection of proteins in human fluids. In our method, plasmonic structures and surface-enhanced Raman scattering (SERS) are incorporated into the paper-base lateral flow strips. The paper-based test strips have been used for detection of the cancer and the traumatic brain injury (TBI) protein biomarkers in clinical patient samples in the point-of-care settings.

报告人简介：Dr. Nianqiang (Nick) Wu is currently George B. Berry Chair Professor in Materials Science Program at West Virginia University (WVU), USA. Dr. Wu is a Fellow of the Electrochemical Society (FECS) and a Fellow of Royal Society of Chemistry (FRSC). He was identified in the 2018 *Highly Cited Researchers* list by Clarivate Analytics (Thomson Reuters). He has received the Benedum Distinguished Scholar Award and the Alice Hamilton Award for Excellence in Occupational Safety & Health. He served as Board of Directors in the Electrochemical Society (ECS) and Chair of ECS Sensor Division in the past. His research interest lies in (i) photocatalysts and photoelectrochemical cells for environmental and energy sustainability, (ii) electrochemical energy storage, and (iii) biosensing and photodynamic therapy (precision medicine). He has authored or co-authored 180 journal articles, 3 book chapters and 1 book entitled "*Biosensors Based on Nanomaterials and Nanodevices*". His papers were cited more than 2,700 times in a single year in 2018, achieving a total citation of >18,300 throughout his career with an *H*-index of 64.