


高分子科学系列讲座

高分子物理与化学国家重点实验室 中国科学院长春应用化学研究所

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报告时间	2012.09.03 上午 9:30	报告地点	主楼四楼学术报告厅 (410 室)
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报告人背景	<p>2004 年在 Risø National Laboratory 获得博士学位; 2004-2006 年, Danish Polymer Center, Risø National Laboratory, 博士后; 2007-2008 年, Risø National Laboratory for Sustainable Energy, Technical University of Denmark, Scientist; 2008-至今, Department of Energy Conversion and Storage, Technical University of Denmark, senior scientist</p> <p>当前研究兴趣: 高分子太阳能电池</p>		
			
报告题目	Structural characterization of polymer solar cells, from high resolution to high through-put		
内 容 摘 要	<p>The structure and architecture of polymer solar cells on scales from nm to mm have crucial impact for the device performance. With standard X-ray scattering techniques, we may determine donor and acceptor domain sizes in polymer solar cells, crystalline structure and characterize the dimensionality of the interface, but to quantify the capability of the nanostructure for separating electron-hole pairs and for transporting free charges, we need access to the 3D structure on the nm scale. X-ray ptychography has the potential to allow these investigations, and has the further advantage that it is a reasonably “mild” technique, due to the weak interaction of X-rays with the material. We have carried out very promising feasibility studies, where we with reasonable ease approach a 100 nm spatial resolution, and with clear pathways for improving resolution below 10 nm.</p>		