黄昆半导体科学技术论坛

**第310期讲座**

**报告题目:** Oxide and Perovskite Structures Grown from Solutions for Advanced Applications.

**报告人：**Prof.Thierry PAUPORTÉ, Institut de Recherche de Chimie-Paris, Chimie ParisTech, Centre National de la Recherche Scientifique, 75005 Paris, France. (E-mail: [thierry-pauporte@chimie-paristech.fr](mailto:thierry-pauporte@chimie-paristech.fr))

**摘要：**During this seminar, we will give a panorama of our recent achievements in the preparation of oxide structures, perovskites and lead-free perovskite related materials. We will show the high possibilities, high control and versatility of solution growth techniques for the preparation of materials with the desired properties.

For the perovskite solar cells, we will illustrate the great importance of the interfaces and selective contact properties for reaching high efficiencies. We will also present results on and estimate the potential of iodobismuthates for an application as an absorber in perovskite solar cells. Due to its surface reactivity and sensitivity as well as its easiness to shape by solution growth method, zinc oxide is a semiconductor material of choice in nanoscience and nanotechnologies. It will be illustrated by the description of nanowire preparations and their integration in nanosensor devices with a remarkably high response and sensitivity to hydrogen.

**简历：**Dr. Thierry Pauporté is director of research at the Centre National de la Recherche Scientifique (CNRS) in France and he works at Chimie-Paristech. He is graduated in Chemistry from the École Normale Supérieure de Lyon. He received his Ph.D. in physical chemistry from the Montpellier II University, France, in 1995. Dr. Th. Pauporté has made original and innovative contributions to the synthesis, characterization and understanding of fundamental chemical and physical properties of oxide films and nanostructures. He also works on hybrid perovskites. His research interests include the functionalizing of the material surfaces and he works on the integration of films and structures in efficient devices. The related applications are the light emitting diodes, perovskite solar cells, dye-sensitized solar cells, nanosensors, photodetectors, photocatalysis, wettability, fouling…. He has published more than 160 journal articles, 5 book chapters and his H-index is 46.

**时间: 2017年10月26日 (星期四) 上午10:00**

**地点: 中国科学院半导体研究所图书馆101会议室**