



澳門大學

UNIVERSIDADE DE MACAU
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講座摘要 Abstract

量子物理與現代信息技術

人類的文明進步和工業發展與基礎科學乃至相關技術發展息息相關。人類文明先後經歷了石器時代、青銅器時代和鐵器時代，而我們目前所處的信息社會可被稱為硅器時代。在講座中，薛其坤院士將從超越歐姆定律的兩個基本物理效應——超導和量子霍爾效應出發，談談下一個可能導致工業革命甚至人類文明進步的因素，談談物理學的關鍵研究方向以及它們可能對未來人類生活的影響。

Quantum Physics and Modern Information Technology

From the Stone Age, through the Bronze Age and the Iron Age and all the way to the modern industrial time, science and technology have contributed much to the advancement of human civilization. We have now entered another stage called the Silicon Age where our society is shaped by information. In this talk, Prof. Qikun XUE will present two effects in physics, which do not subject themselves to Ohm's law, i.e. the superconductivity effect and the Quantum Hall effect, and discuss the factors that may lead to another industrial revolution and advancement in civilization. Prof. Xue will also give an account of the key research direction of physics and its possible impacts on our future life.