北京大学百年物理讲坛

Centennial Physics Lectures at Peking University

Lecture 19

Nanomaterials for energy conversion devices

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Advances in colloidal quantum dots, perovskites, and nanostructured metals have increased dramatically our ability to construct new functional optoelectronic and electrochemical devices. I will highlight recent advances in light sensors, solar cells, and lasers based on quantum dots; perovskites in both solar cells and light-emitting devices; and new electrocatalysis systems for the upgrade of renewable electricity + CO2 into fuels and chemical feedstocks.

Edward H. Sargent holds the rank of University Professor at the University of Toronto. He also serves as Vice-President International. His publications have been cited over 25,000 times; 86 of his publications have been cited 86 times or more. He founded InVisage Technologies, Xagenic, and QDSolar. He earned his degrees in Engineering Physics (Queen's, 1995) and Electrical and Computer Engineering (Toronto, 1998). He has been Visiting Professor at MIT (2004-5) and at Berkeley (2017).

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