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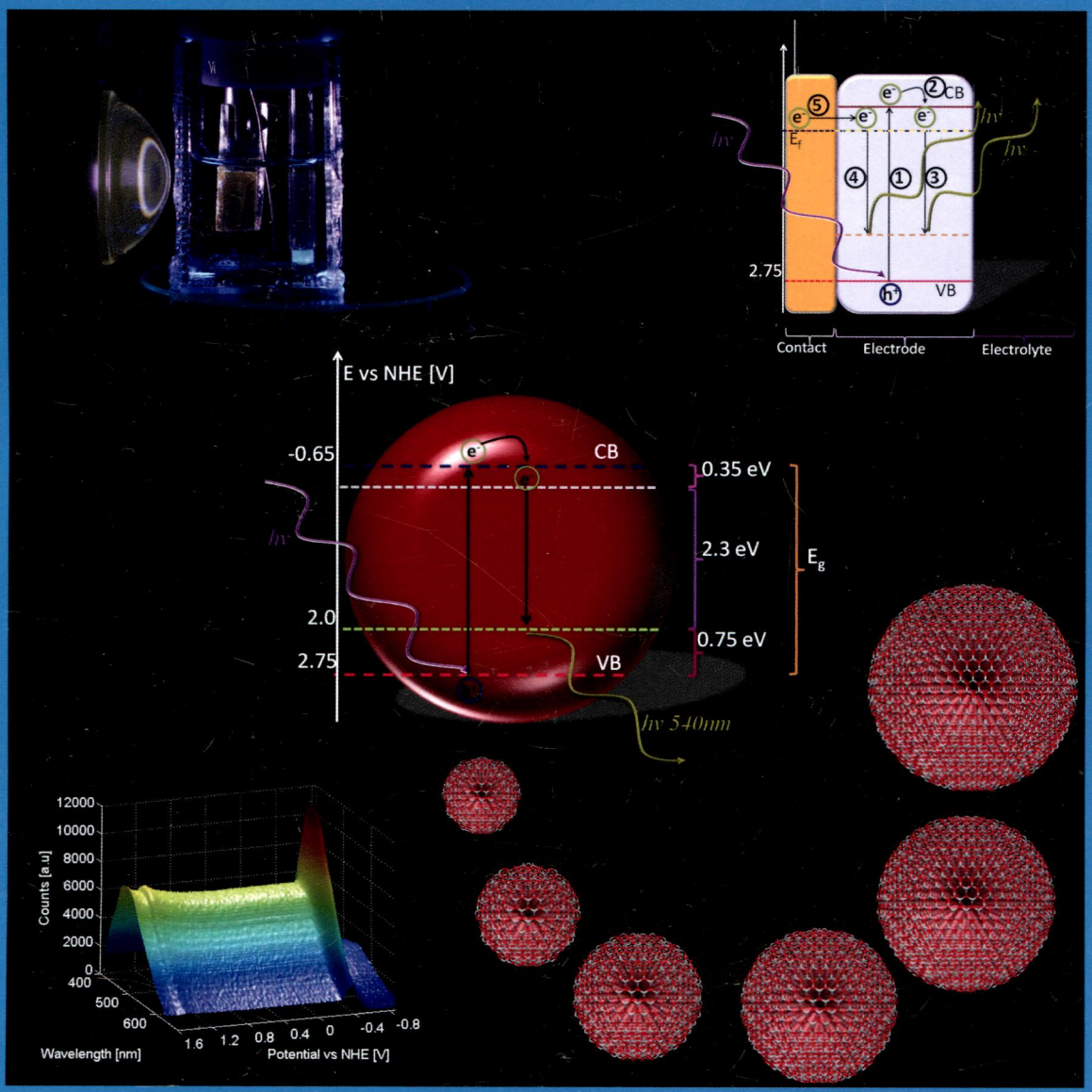

Spectroelectrochemical Method for Locating Fluorescence Trap States in Nanoparticles and Quantum Dots
(see page 5A)

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ON THE COVER: Spectroelectrochemical method for locating fluorescence trap states in nanoparticles and quantum dots. The fluorescence from trap states found in nanoparticles and quantum dots not only gives insight into the inner structure of the materials but also is often strongly dependent on the nature of the surfaces. A deeper understanding of these trap states and their absolute energy can be very valuable in the design and optimization of many devices utilizing nanoparticles and quantum dots. Here we have demonstrated how the absolute energetic position of the trap levels involved in fluorescence can be determined by measuring fluorescence as a function of applied potential under specified kinetic conditions. The method is applied to electrodes of ZnO quantum dots of increasing size. See page S497.

Articles

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Physical Processes in Nanomaterials and Nanostructures

Additions and Corrections