

Applying of the alloyed quantum dots in biosensing development

Colloidal quantum dots are the popular material in the large area of the optical assays and sensors developments. Alloyed quantum dots (AQDs) are the type of the colloidal luminescent nanocrystals that have a several impacting advantages against the most common heterostructural quantum dots. First, AQDs have the simple and reproducible procedure of synthesis, high quantum yields and narrow emission peaks. Then, AQDs have a high sensitivity for the environment state conditions changes, that make them perfect labels in the luminescence turn-off-based sensing systems.

In the current research we present the universal basic recognition system element based on AQDs enzymatic luminescence quenching. AQDs made of CdZnSeS/ZnS semiconductor compound was taken as a source of analytical signal. Principal scheme of application, analytical advantages and possible restrictions was described.

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