

# Optical properties of ZnS nanocrystals/ $\text{KH}_2\text{PO}_4$ dielectric crystal

## Authors

O Halimi, S Addala, L Bouhdjar, M Sebais, M Benguedouar

## Publication date

2011/4/24

## Conference

2011 Saudi International Electronics, Communications and Photonics Conference (SIECPC)

## Pages

1-1

## Publisher

IEEE

## Description

The properties of highly luminescent II-VI semiconductor nanoparticles have been extensively investigated to the application field. Generally the optical properties of crystals become extremely different with miniaturization of size. Nanocrystals (NCs) are having an increasing importance due to their influence in different properties due to the quantum confinement stimulated by size decreasing. Electron and phonon confinement is possible by II-VI NCs semiconductor when the size of particles tend to Bohr radius of the bulk crystal exciton showing new physical properties. These intriguing phenomena have been found new applications in telecommunication and Photonics. Potassium dihydrogenophosphate  $\text{KH}_2\text{PO}_4$  (KDP) has been recently used as a host matrix of ZnS semiconductor NCs as it is a transparent crystal in the UV-Visible region. KDP is a well known dielectric material for its nonlinear optical and electro ...