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Incorporation of zinc into  $\text{CdS}_{1-x}\text{Se}_x$  nanocrystals in glass matrix studied by optical spectroscopies

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## Abstract

The formation of quaternary  $\text{Cd}_{1-y}\text{Zn}_y\text{S}_{1-x}\text{Se}_x$  nanocrystals in a borosilicate glass matrix due to incorporation of zinc into  $\text{CdS}_{1-x}\text{Se}_x$  quantum dots under heat treatment is investigated by Raman scattering and optical absorption spectroscopy. Average size and composition of the nanocrystals are determined. Factors affecting the accuracy of Raman scattering-based determination of the mixed nanocrystal composition are analyzed. (© 2004 WILEY-VCH Verlag GmbH & Co. KGaA, Weinheim)

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