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Band edge excitons and trions in CdSe/CdS core/shell nanocrystals ANDREW SHABAEV, George Mason University, USA, ANNA RODINA, Ioffe Physical-Technical Institute, Russia, ALEXANDER EFROS, Naval Research Laboratory, USA — We have developed a theory of positevly and negatively charged excitons (trions) in "giant" CdSe/CdS core-shell nanocrystals. The theory describes the energy structure of excitons and trions. We present the results of calculations for the fine structure of the the positively charged trion, the binding energy of the negatively charged trion, and the radiative decay time for excitons and trions. The theoretical results are compared with available experimental data.

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