

Abstract Submitted  
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**How to select quantum dots with smallest fine structure splitting under uniaxial stress for entangled photon sources** MING GONG, WEIWEI ZHANG, GUANGCAN GUO, LIXIN HE, Key Laboratory of Quantum Information, University of Science and Technology of China, Hefei, 230026g, HE TEAM — We propose a microscopic theory to build an exact relationship between the fine structure splitting (FSS) of exciton, the polarization of the emission lines and the amount of asymmetry in self-assembled quantum dots (QDs). Based on our model, strategy to select QDs with smallest FSS from large amount of QDs is proposed. The predilection in this work is supported by million atom empirical pseudo-potential calculation. Our theory can greatly simplify the method to generate entangled photon sources using single QD.

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