

Abstract Submitted  
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**Magnetic Field Effect on Hybrid Exciton in a Quantum Dot Coated by an Organic Shell** JUSTIN ANGUS, QUE HUONG NGUYEN<sup>1</sup>, Marshall University — We investigate the effect of magnetic field perturbations on the hybrid exciton in a semiconductor quantum dot coated by an organic material. The spatial confinement effect of electron and holes of the heterostructures have been considered together with the quantum confined Zeeman effect and the magnetic confinement. Upon the application of magnetic field the coupling term between the two kinds of excitons increases. An important result is the possibility of tuning the Wannier-Frenkel exciton resonance by applied magnetic fields.

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