Electronic structures of (In,Ga)As/GaAs quantum dot molecules made of dots with dissimilar sizes

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M - - , w QDM' I ,G A/G AS

$$\Gamma = \begin{bmatrix} 0 & c_3 & 0 & c_1 \\ c_3 & 0 & c_2 & 0 \\ 0 & c_2 & 0 & c_4 \\ c_1 & 0 & c_4 & 0 \end{bmatrix} \quad (14)$$

$|i\rangle, |j\rangle = |e_T^{\uparrow}\mathbf{e}$

B. Degree of entanglement vs double occupation

E ... t, ll , t, g t, ... g, t, DOE t,w l t, g t, QDM t,l , w l t, g l t, l g t, ... g t, gg l t, , l , t, . T t, w , l , g , l t, l t, l t, t,w t, DOE t, , l - , t, t, . T t, l t, g t, g 3 , l - , l , l - , t, t, , t, t, P , l l, g - l . H , w g, gg t, l t, t,w t, DOE , l - , t, t, t, , , -g t, g , l t, $^1\Gamma_g^{|a|}$. g t, g ... l g t, g , w l t, s t, l t, g g . T , , -g t, g , l t, $^1\Gamma_g^{|a|}$ w , - t, , ll w tt, g

$$\Gamma|^1\Gamma_g^{|a|}| = c_1|e_T^{\uparrow}, e_B^{\downarrow}| + c_2|e_B^{\uparrow}, e_T^{\downarrow}| + c_3|e_T^{\uparrow}, e_T^{\downarrow}| + c_4|e_B^{\uparrow}, e_B^{\downarrow}| \quad (12)$$

$|c_1|^2+|c_2|^2+|c_3|^2+|c_4|^2=1$. A t, t, l , w

$$\Gamma|^1\Gamma_g^{|a|}| = \sum_{i,j} \Gamma_{ij}|i\rangle \otimes |j\rangle, \quad (13)$$

w

-QDM's ... -QDM's. ... -QDM's ... -QDM's ... -QDM's ... -QDM's ... C ... -QMD ... -QDM's ... QDM ...

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