

Supporting Information for

Exciton recombination dynamics in CdSe nanowires:  
Bimolecular to three-carrier Auger kinetics

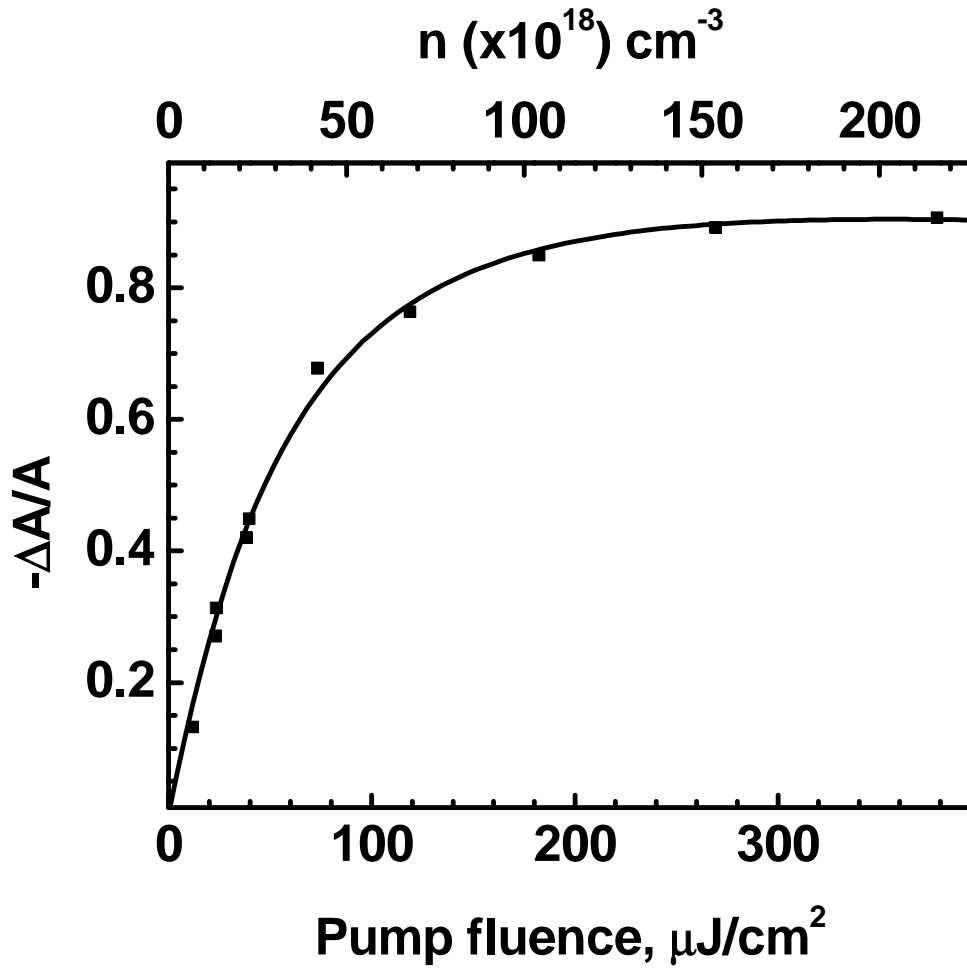
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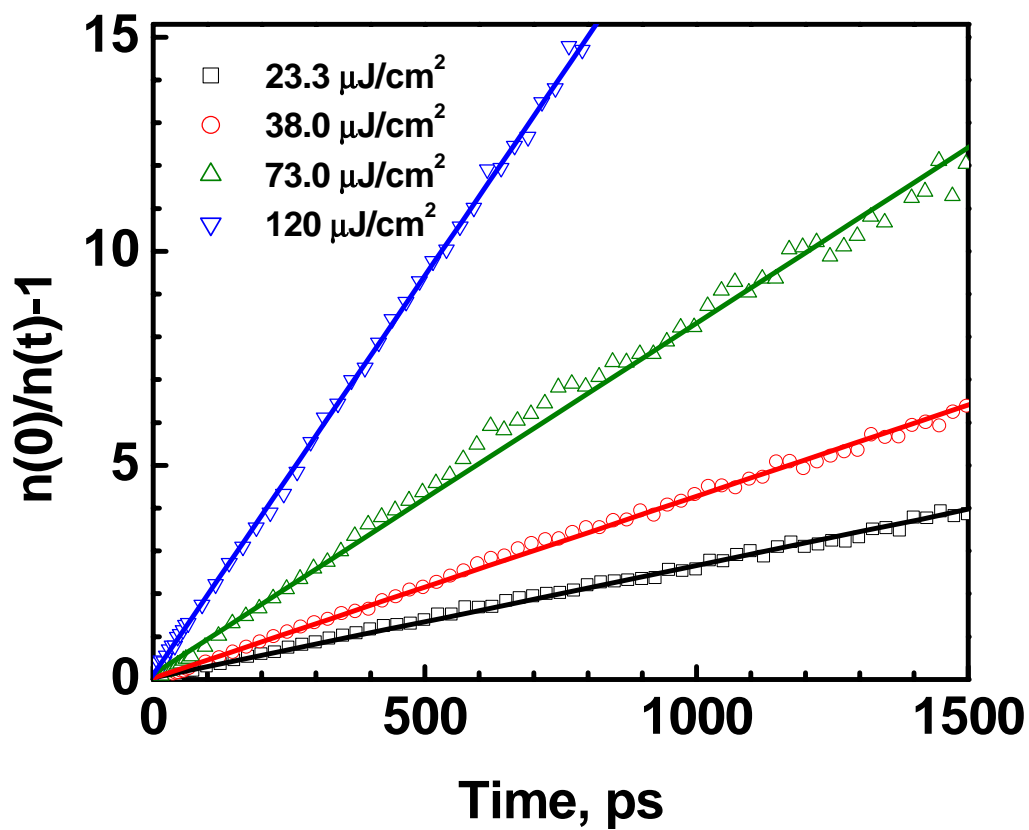
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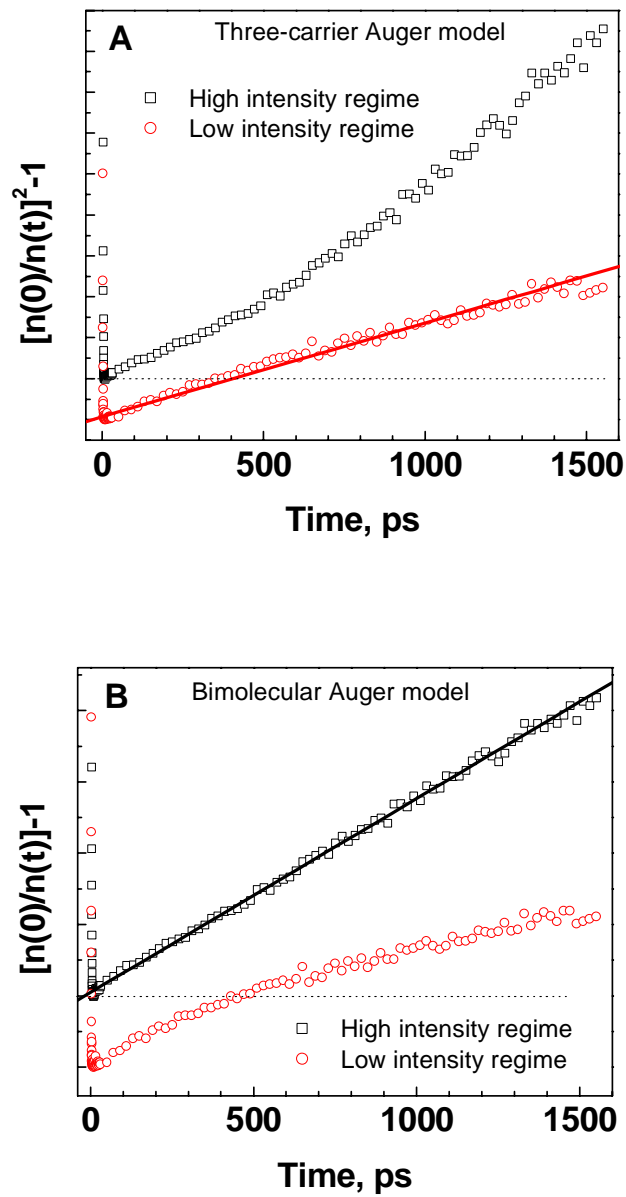
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**Figure S1.** Absorption saturation of the band edge state ( $\alpha$ ) fit by the generic curve  $\Delta A/A = B_1 \times j / (B_2 + j^k)$ , where  $j$  is the pump fluence and the resulting fit parameters are  $B_1 = 3.5 \pm 1$ ,  $B_2 = 230 \pm 100$ , and  $k = 1.20 \pm 0.06$ . Conversion to  $n$  through  $n(0) = j\sigma/V$ .



**Figure S2.** Plot of  $n(0)/n(t)-1$  as a function of time for different excitation intensities. In the case of a bimolecular (exciton-exciton) Auger recombination process plotting  $n(0)/n(t)-1=C_2 \times n(0) \times t$  vs.  $t$  results in a linear dependence.



**Figure S3.** Plots of  $[n(0)/n(t)]^2 - 1$  for the three-carrier Auger model (A) and  $[n(0)/n(t)] - 1$  for the bimolecular (exciton-exciton) Auger model (B) in both 'low' and 'high' intensity regimes. The plots result in a linear dependence vs. time if the correct model is used.