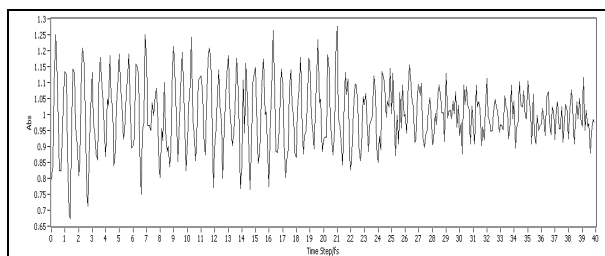


# PHASE CONTROL OF PbSe QUANTUM DOTS: IMPLICATIONS FOR MULTIPLE EXCITON GENERATION

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Multiple exciton generation in semiconductor nanocrystals is an increasingly provocative topic in the community not only as a fundamentally novel process, but also as a potentially profound advancement into 3<sup>rd</sup> generation solar cell development. 4-phase switching, a femtosecond pulse shaping technique recently developed in our lab, is employed to reveal phase dependence of exciton states in PbSe quantum dots. Theoretical descriptions are currently being developed to elucidate the observed phase sensitivity. Implications to the electronic context of MEG and coherent control are discussed.



Normalized induced absorption change as phase switching functions are applied. Pump  $\sim$  800nm, probe  $\sim$  1712 nm.