

Synthesis, Optical Properties, and Photochemical Activity of Zinc-Indium-Sulfide Nanoplates

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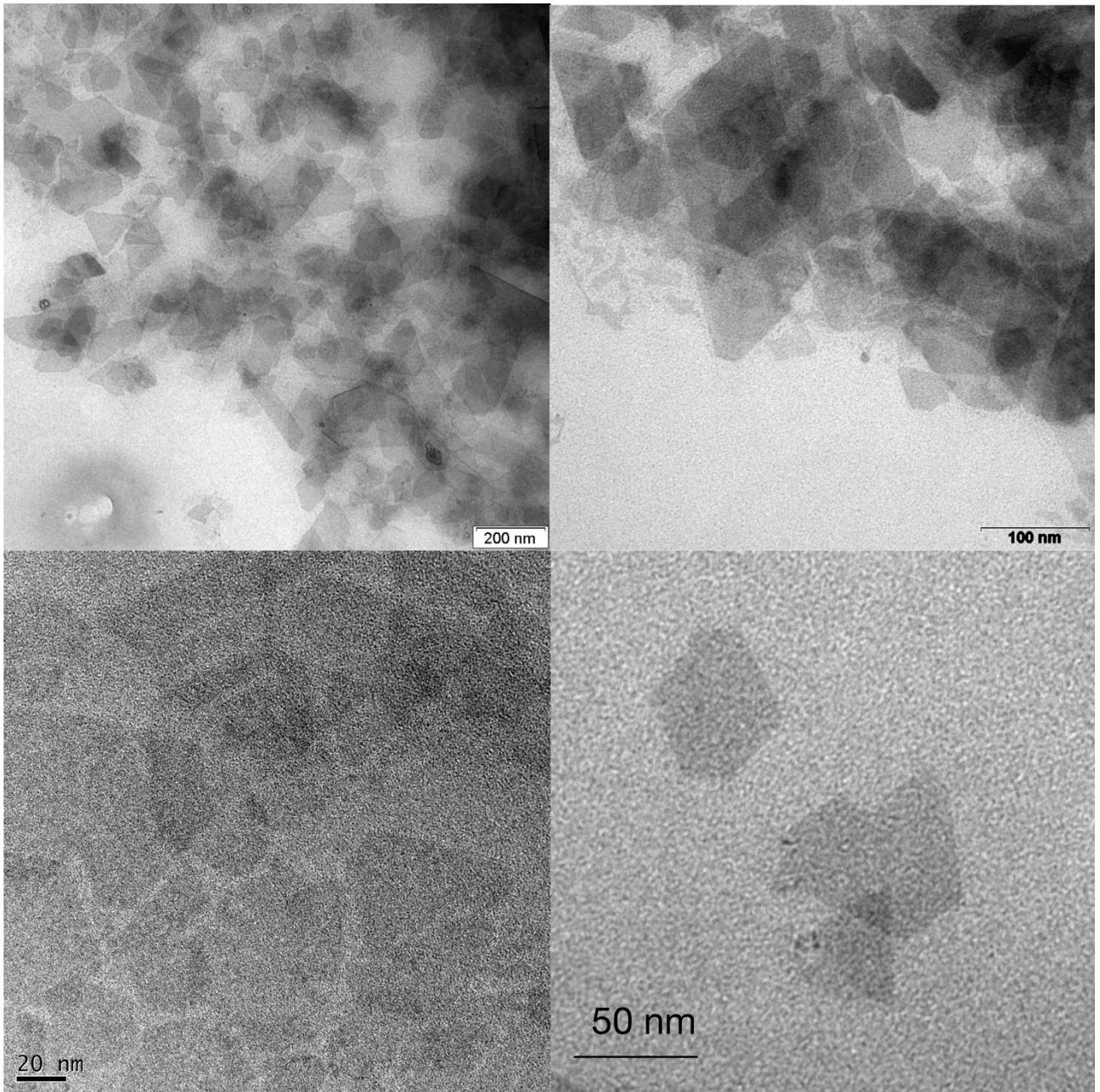


Figure S1: TEM images of ZIS nanoplates

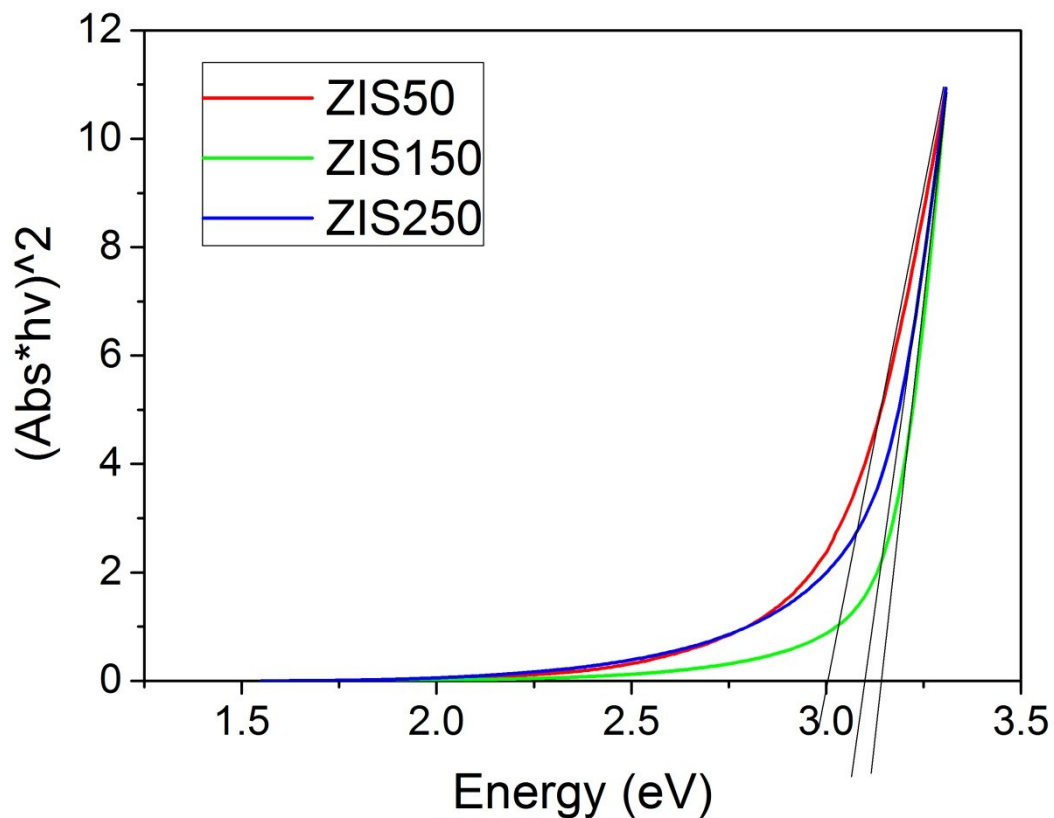
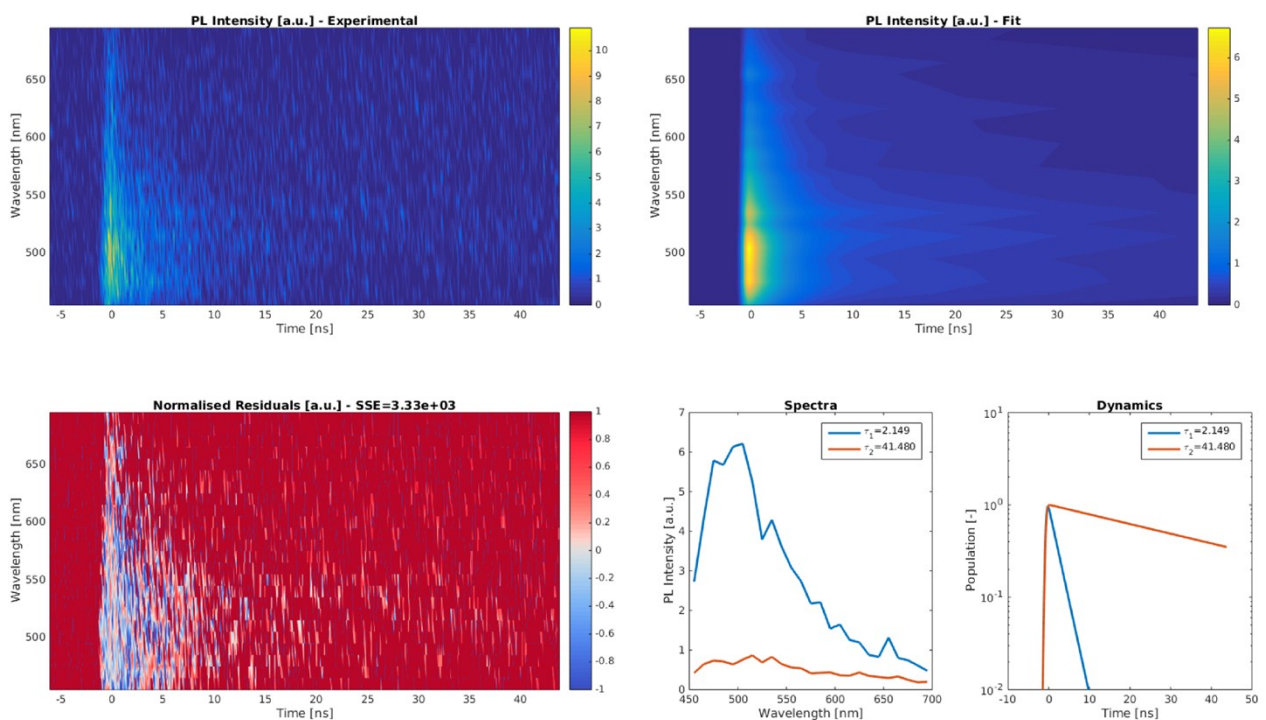
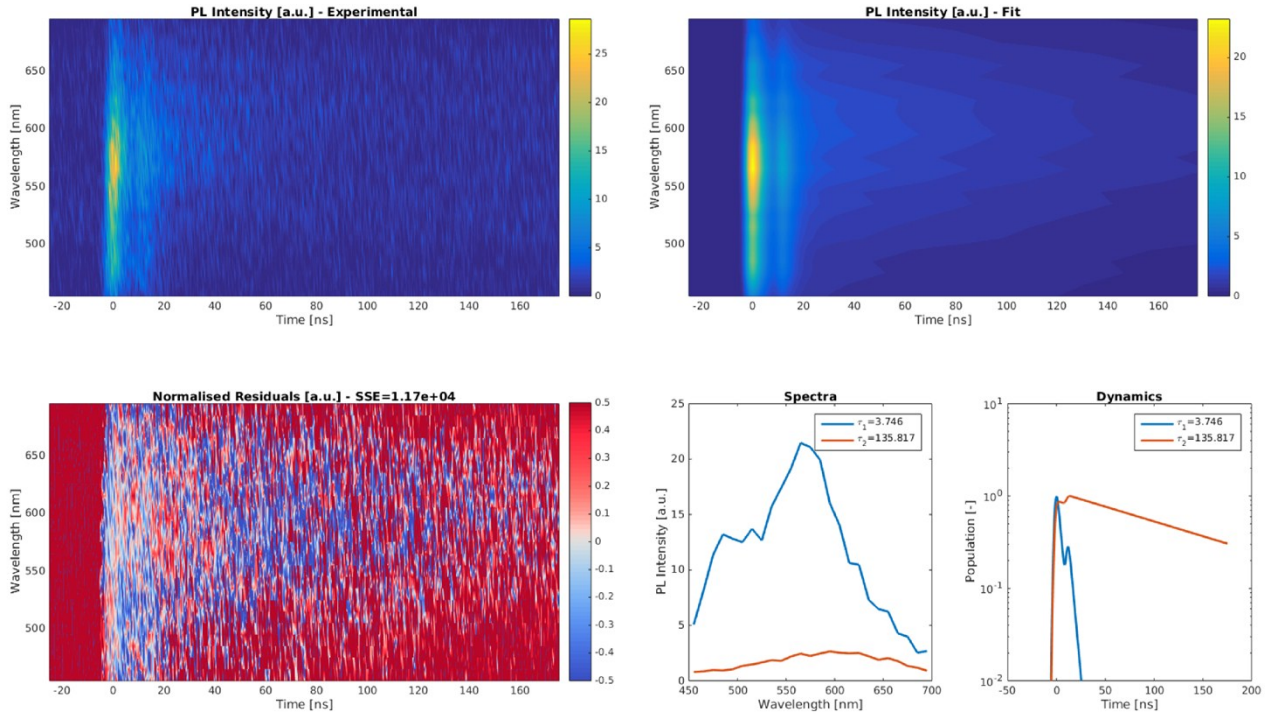


Figure S2: Tauc's plot of absorbance squared versus energy. The linear relationship signifies a direct band gap. The extrapolation to the energy axis give the bandgap. There is a significant contribution from below gap absorption likely resulting from defect states within the forbidden gap.

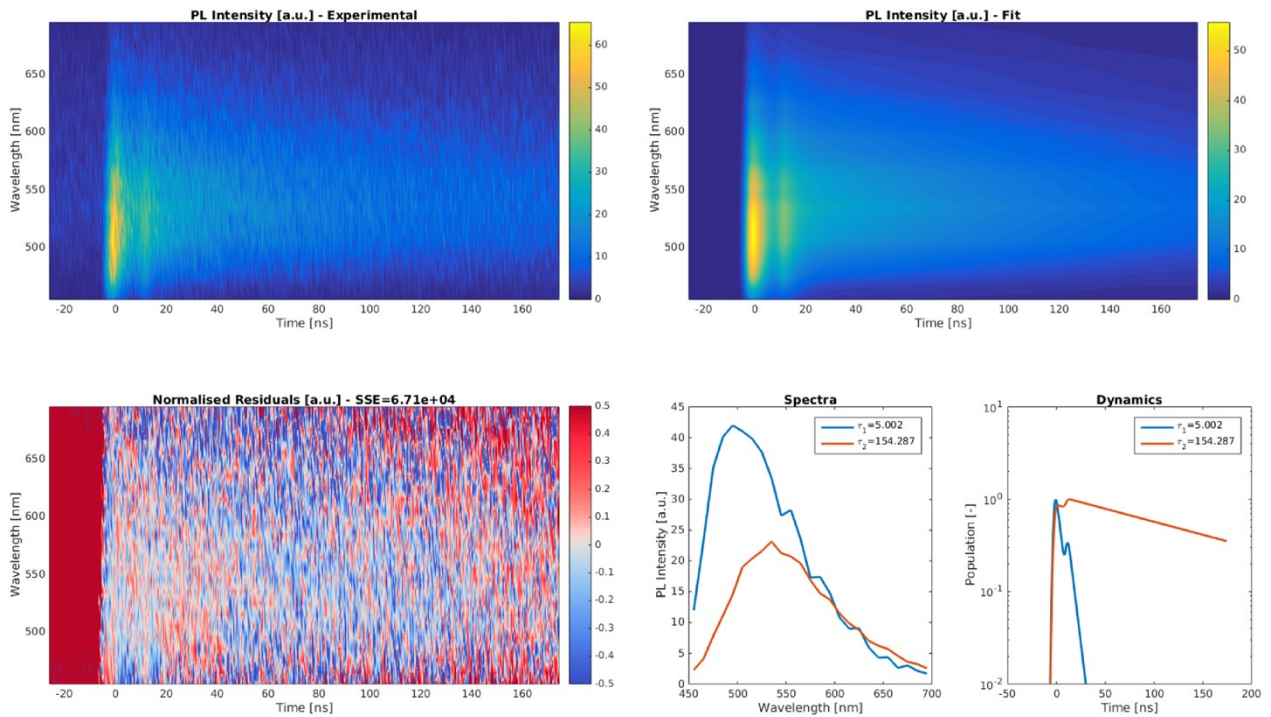
ZIS0



ZIS50



ZIS150



ZIS250

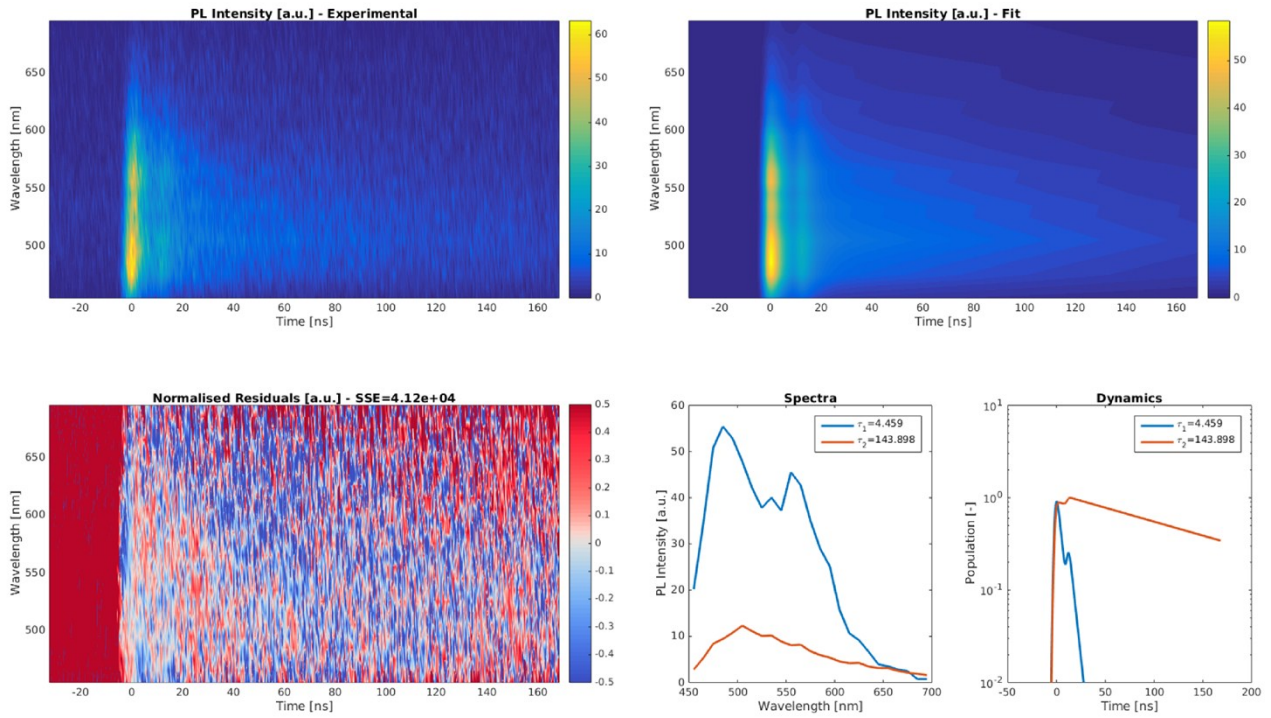


Figure S3: Global fits to TR PL data using EQ1 for samples ZIS0, ZIS50, ZIS150, and ZIS250. Residuals have been normalised to the experimental data as to more faithfully reflect inaccuracies. Dynamics were convolved with appropriate TR PL system temporal response functions. Some secondary excitations arising from leaked pulses in the acousto-optical modulator can be seen.

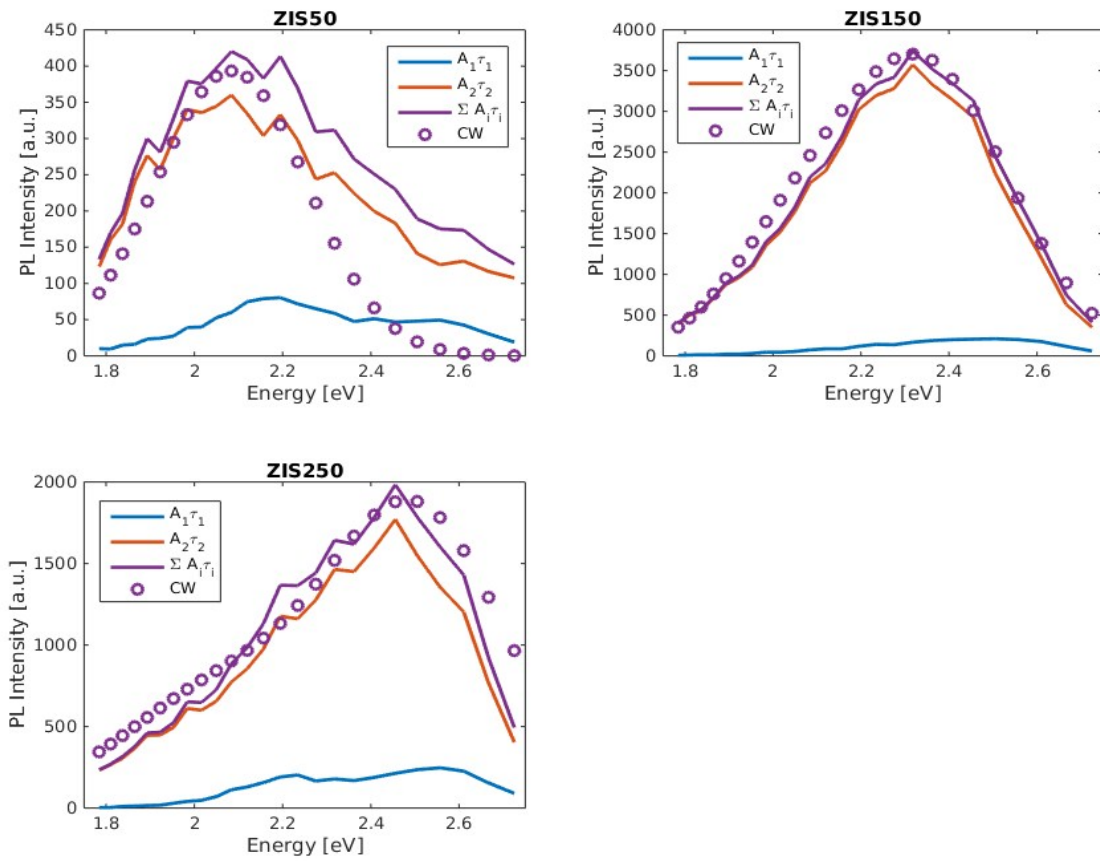


Figure S4: Temporal integrals of the TR PL global fit components. In each case, the time-integrated emission is dominated by long lifetime component (τ_2) despite its low relative amplitude. The CW experimental data are also plotted for comparison.