**Supplementary information**

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**Fig. S1.** Molecular structures of a) curcumin and b) indigocarmine.



**Fig. S2.** Particle size distribution curves for zein colloidal dispersions containing varying ratios of Cur:IC.



**Fig. S3.** Absorption spectra of Cur and IC (molecular solutions in ethanol and water respectively) and colloidal dispersions containing zein:Cur (20:1) and zein: IC (20:1).



**Fig. S4.** Measured (a) and calculated (b) absorption spectra of composite colloidal dispersions prepared at varying ratios of Cur:IC.



**Fig. S5.** X-ray diffraction graphs for Cur, IC and composite colloidal particles containing zein:Cur:IC at a ratio of 20:1:1.