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ARTICLE

Light harvesting in photonic crystals revisited: why do slow photons at the blue edge enhance absorption?

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Electronic supplementary information

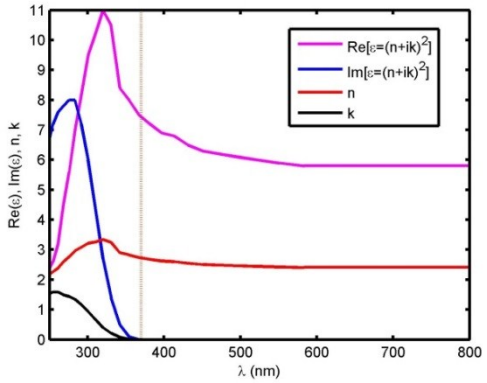

Fig. S1 Optical constants of anatase TiO_2 used for simulations. The vertical dotted line indicates the TiO_2 electronic excitation wavelength. Below that wavelength (above electronic band edge), photons are absorbed by TiO_2 material.

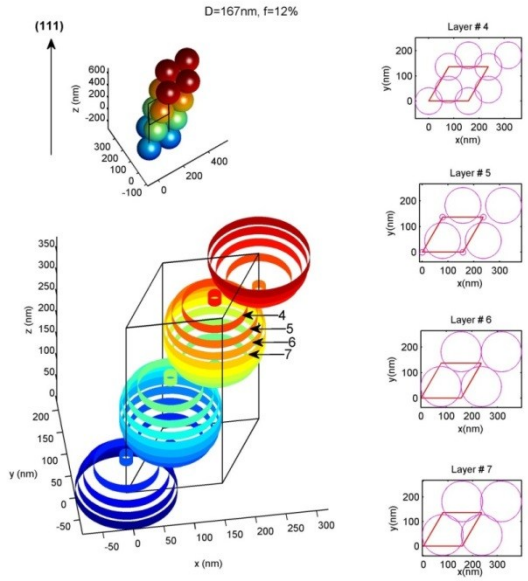

Fig. S2. Inverse opal unit cell and its discretization into computational layers (left). The case of interpenetrating spheres (f<26%) is shown. The IO slab was cut perpendicularly to the (111) crystallographic direction. Depending on z-position in the unit cell, sphere cross sections in (x,y) plane either overlapped each other (layers #4, 7), touched each other (layer #6), or did not touch (layer #5). The parallelepiped unit cell (in black) had parallelogram cross section (in red) in (x,y) plane.