



Supplementary Fig. S1. Light and corresponding fluorescence (Calcofluor white staining to visualize cellulose) micrographs of *Zygnema* S (A), *Zygnema* E-A (B), *Klebsormidium cernulatum* (C) and *Klebsormidium nitens* (D). (A) strong fluorescence in all longitudinal cell walls and in the cross cell walls of larger cells (arrows), weak signal in smaller cells (arrowhead). (B) strong fluorescence in longitudinal cell walls with a maximum in cell corners (arrowheads). (C) longitudinal cell walls show less staining compared to cross cell walls. (D) strong fluorescence in the cross cell walls with a maximum in centrally located protuberances (arrows). Scale bar = 10 μm (A, B), 5 μm (C, D).