

Supplementary Movie 1. Avoidance movement of chloroplasts in a petiole cell of an adult *Arabidopsis* leaf. Green, actin filaments visualized with GFP-talin; red, chloroplasts. The movie runs 300 times faster than real time. Corresponds to Figure 3A.

Supplementary Movie 2. Serial sections showing microfilaments at metaphase during cytokinesis in suspension-cultured tobacco cells. Thirty-four serial images, whose interval was 0.5 μm , were acquired using transgenic tobacco suspension-cultured cells expressing GFP-ABD2. Corresponds to Figure 3B.

Supplementary Movie 3. Three-dimensional view of peroxisomes in suspension-cultured tobacco cells. Peroxisomes in suspension-cultured tobacco cells were visualized using the GFP-PTS1 fusion. Eighty-four images were acquired at intervals of 0.45 μm , and used to construct a 3-D view of these cells. Corresponds to Figure 3C.