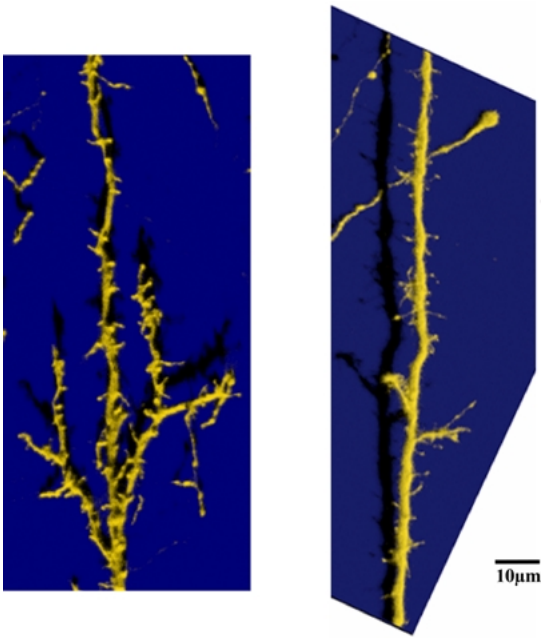

FIGURE 18-11 Three-dimensional visualization of dendritic segments is obtained by combining a series of single confocal images in depth. To create these reconstructions, the visualization method "Simulated Fluorescent Process" of the Imaris software (see Section 3.3) was used. In short, each voxel of the 3D dataset is assigned an absorption and an emission factor based on its intensity in the original dataset. This information, together with the depth information, is used to assign the transparency and the shadow-casting properties of the final image (Messerli et al., 1993).