



Supplementary Materials

Article

Imaging the Kidney with an Unconventional Scanning Electron Microscopy Technique: Analysis of the Subpodocyte Space in Diabetic Mice

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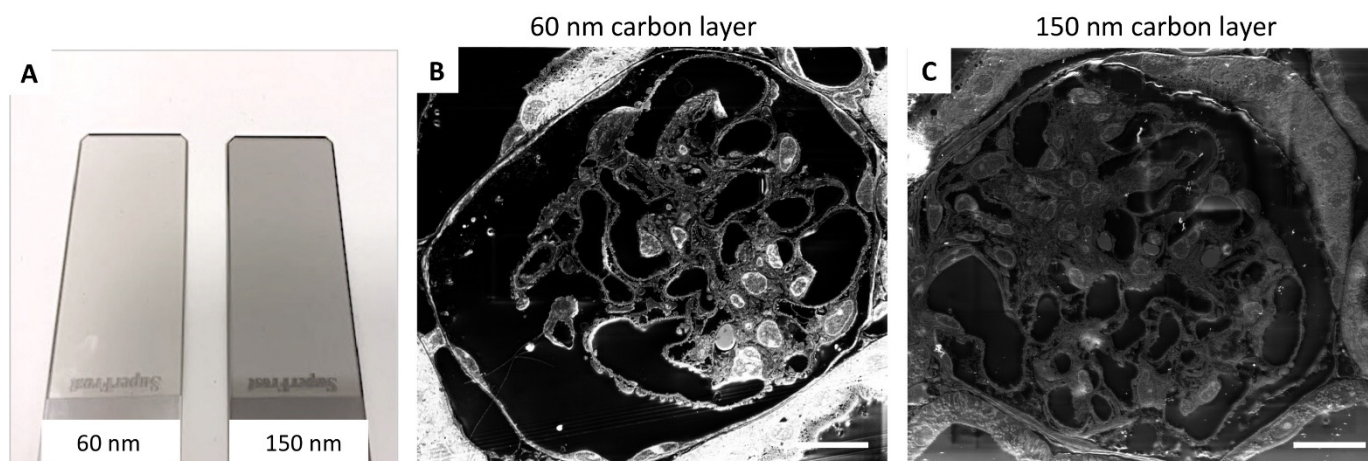


Figure S1. Comparison of different thicknesses of carbon coating. (A) Glass slides were sputter-coated with a different layer of carbon. (B) Representative SE-SEM micrographs acquired from glass slides coated with 60 nm and (C) with 150 nm of carbon. Scale bars: 100 μm .

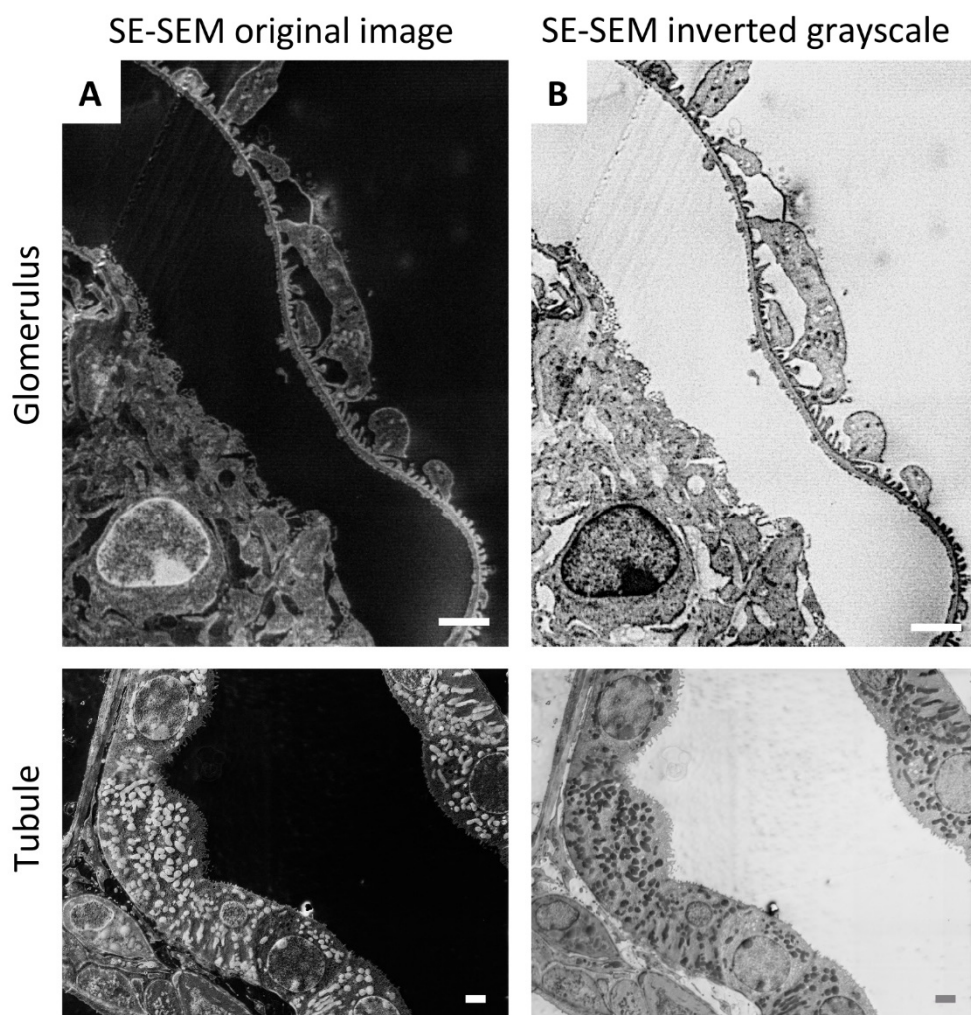


Figure S2. Comparison of the original SE-SEM images with TEM-like SE-SEM image colours. (A) Original SE-SEM micrographs of the glomerulus (upper panel) and the tubule (lower panel). (B) TEM-like images colour of the glomerulus (upper panel) and the tubule (lower panel), obtained by reversing the SE-SEM images grayscale. Scale bars: 2 μm .

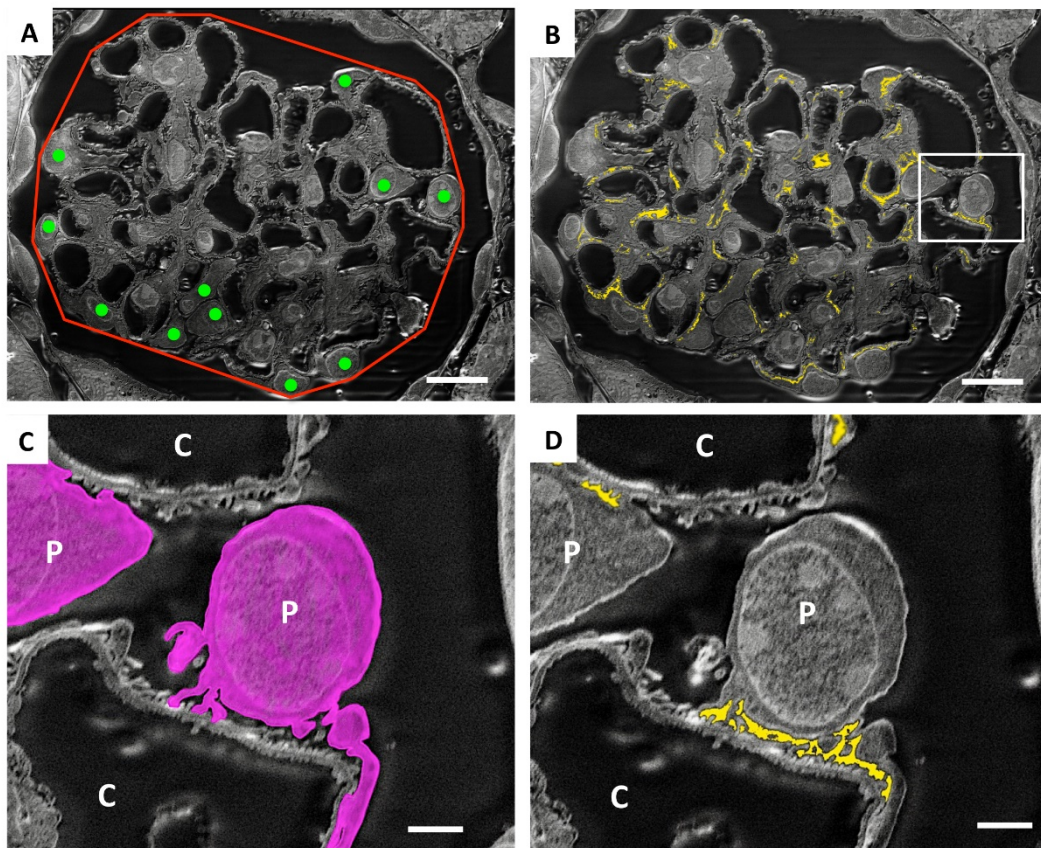


Figure S3. The SE-SEM image segmentation method. (A) Glomerular area was estimated by outlining the outer polygon of the glomerular capillary tuft and podocytes were clearly identified based on their morphological features (green dots). (B) The high resolving power achieved by SE-SEM was perfect for visualising and segmenting the SPS with high accuracy and precision. (C) Segmentation of the podocyte body (highlighted in pink) and (D) of the SPS (highlighted in yellow), on images acquired from BTBR WT mice. Scale bars: 10 μm for A and B; 2 μm for C and D. Abbreviations: P, podocyte; C, capillary lumen.