

Additional material

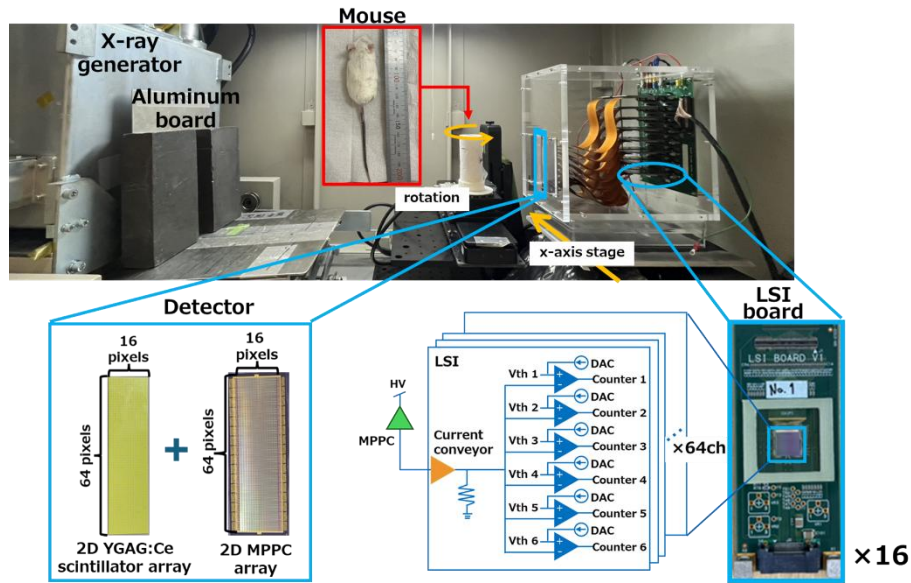


Fig. 1 Overview of in vivo imaging setup using a 2D PC-CT system.

Lower left: MPPC-based detector array comprising a 2D YGAG:Ce scintillator array and a 2D MPPC array. Lower right: Signals from the MPPC are processed using developed 16 × 64 channels LSI[1].

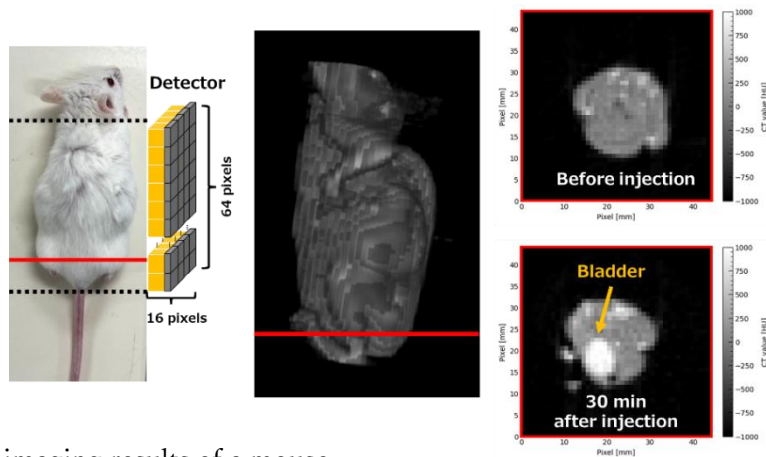


Fig. 2 In vivo imaging results of a mouse.

Left: Mouse used as the subject for in vivo CT imaging, with the imaging area spanning from the tail to the neck, captured using 1024-channel detector. Center: 3D reconstructed CT image at 50-60 keV with contrast agent. Right: Cross-sectional CT image corresponding to the red line, before (top) and 30 minutes after (bottom) EOB contrast agent injection. CT values of the bladder are higher after contrast injection.

[1] M. Arimoto et al, "Development of 64-channel LSI with ultrafast analog and digital signal processing dedicated for photon-counting computed tomography with multi-pixel photon counter", Nucl. Instr. Meth. A, 1047:167721, 2023