

Description of Additional Supplementary Files

File Name: Supplementary Movie 1

Description: Fast NIR-IIb in vivo dynamic imaging of Er-RENPs@PMH-PEG labeled cerebral blood flow in a C57Bl/6 mouse brain. Total video time: 41.8 s, frame rate: 25.6 frames/s.

File Name: Supplementary Movie 2

Description: Fast NIR-IIb in vivo dynamic imaging of Er-RENPs@PMH-PEG labeled blood flow in a C57Bl/6 mouse hindlimb. Total video time: 43.7 s, frame rate: 25.6 frames/s.