Supporting Information

# Comparison of penetration depth in mouse brain in vivo through 3PF imaging labelled by AIE nano particles and THG imaging within the 1700 nm window

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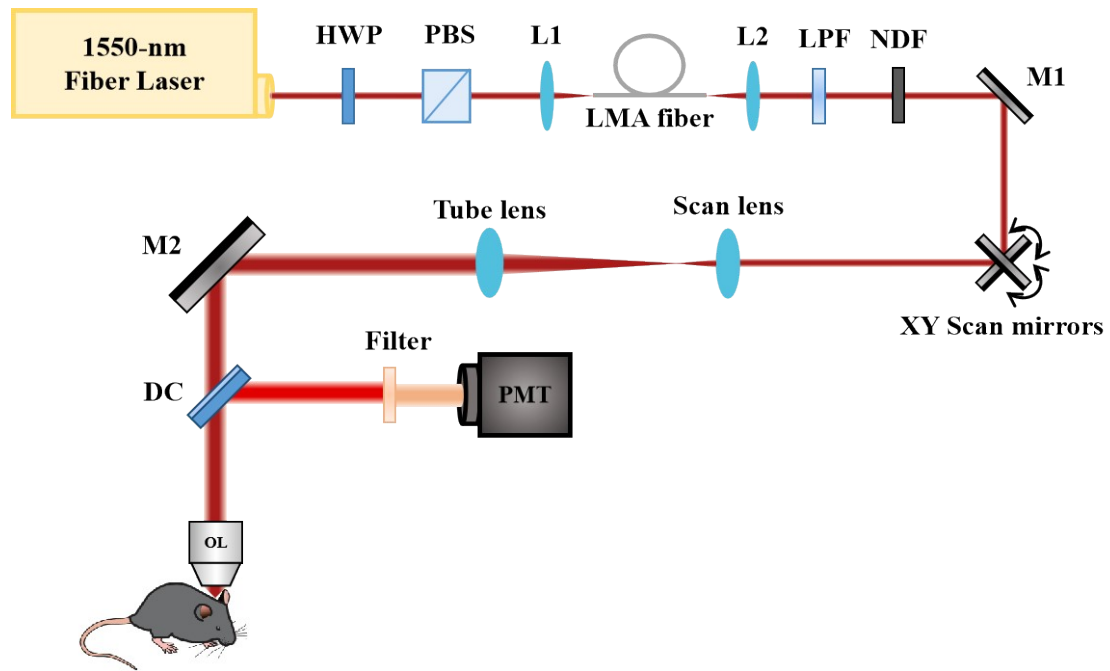E-mail: pingqiu@szu.edu.cn, kewangfs@szu.edu.cn

Fig. S1 The experimental setup of 3PM imaging system. HWP: half-wave plate; PBS: polarization beam splitter; L1 and L2: focusing and collimating lens; LPF: long-pass filter; NDF: neutral density filter; M1 and M2: silver-coated mirror; DC: dichroic mirror; Filter: band-pass filter; PMT: GaAsP photo-multiplier tube; OL: objective lens.

Table S1 In vivo mouse deep-brain imaging of different fluorescence indicator with 1700nm window

| Wavelength (nm) | Materials | MPM | Concentration | Depth (μm) | Repetition rate (MHz) | Ref. |
|---|---|---|---|---|---|---|
| 1600 | MTTCM NPs | 3PM | 1 mM | 840 | 6 | * |
| 1610 | BONAPs | 3PM | 50 mg/kg | 1680 | 1 | [1] |
| 1617 | ICG | 2PM | 2 mM | 2000 | 1 | [2] |
| 1620 | SR101 | 3PM | 3.3 mg/ml | 1340 | 1 | [3] |
| 1660 | MTTCM NPs | 3PM | 2 mM | 1900 | 1 | [4] |
| 1665 | Texas red | 3PM | 700 μM | 1650 | 1 | [5] |
| 1665 | Qtracker655 | 3PM | 2 μM | 2100 | 1 | [6] |
| 1665 | DPNA-NZ | 3PM | 2 mM | 1700 | 1 | [7] |
| 1665 | DPCZ-BT | 3PM | 2 mM | 1860 | 1 | [8] |
| 1700 | DCTBT | 2PM | 2 mM | 2180 | 1 | [9] |
| 1700 | MTTCM NPs | 3PM | 1 mM | 890 | 6 | * |
| 1720 | OEFT NPs | 3PM | 550 μM | 1696 | 1 | [10] |
| 1800 | MTTCM NPs | 3PM | 1 mM | 810 | 6 | * |

* Experimental parameters from this article

Note: The repetition rate of the laser used in this experiment was 6 MHz, while all other experiments used a repetition rate of 1 MHz. Because of the higher repetition rate used in this experiment, the pulse energy is lower and the imaging depth is smaller.

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