(a) Schematic diagram of the circuit. PMT: photomultiplier tube, RX/CX: input resistor and capacitor, CLR: clear, SN74HC05: quad 2-input positive edge triggered D flip-flop, High-speed camera, Oscilloscope. 

(b) Flowchart of the process: 
1. Input fluorescent signal and threshold setting 
2. Output signal from comparator 
3. Waveform shaping of comparator output 
4. Generation of $\Delta t$ for fs laser pulse irradiation 
5. Output of trigger for single fs laser pulse picker 
6. Fs laser pulses with rep. rate of 1 MHz