

Supporting Information

Recent advances in luminescent materials for super-resolution imaging *via* stimulated emission depletion nanoscopy

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Table S1. The resolutions in STED nanoscopy by using various fluorophores.

Fluorophores	Resolution
Carbon dot ^a	30 nm
Up-conversion nanoparticles ^b	31.2 nm
CsPbBr ₃ QDs ^c	20.6 nm
Fluorescent proteins ^d	52 nm
Rhodamines-based organic fluorophores ^e	20 nm
AIE fluorophores ^f	31.2 nm

a: Nanoscale, 2014, 6, 8617; b: Nature, 2017, 543, 229; c: Advanced Materials, 2018, 30, 1800167; d: Proc. Natl. Acad. Sci. U. S. A., 2008, 105, 14271; e: Optical Nanoscopy, 2012, 1, 7; f: Advanced Materials, 2017, 29, 1703643.

Table S2. The resolution and STED depletion power for various fluorophores in STED imaging.

Fluorophores	Resolution (nm)	STED Power
Lanthanide-Doped Nanoparticles ^a	130	222 mW/cm ²
CdSe QDs ^b	54	344 mW
fluorescent marker protein ^c	70	32 mW
Conventional organic luminescent materials ^d	40-60	14 mW
AIE luminogens ^e	30.6	312.5 mW
CsPbBr ₃ QDs ^f	20.6	5 mW

a: Chemistry-a European Journal, 2014, 20, 146; b: Nature Communications, 2015, 6, 7127; c: Chemical Communications, 2017, 53, 979; d: Angewandte Chemie International Edition, 2016, 55, 3290; e: Advanced Materials, 2017, 29, 1703643; f: Advanced Materials, 2018, 30, 1800167.