Size Effect of Mesoporous Organosilica Nanoparticles on Penetration and Accumulation for Tumor

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Figure S1. High magnification TEM image of the 60-nm MONs. scale bar: 50 nm.

Figure S2. High magnification TEM image of the 100-nm MONs.
**Figure S3.** The hydrodynamic size distributions in DMEM containing 10% FBS.

**Figure S4.** Weight change of the MON-treated mice 30 days post-injection at a dose of 5 mg kg$^{-1}$. 
Figure S5. Serum biochemical analysis of the mice after injection with different-sized MONs at a dose of 5 mg/kg. The measures include ALT, AST, BUN, and Cre.
**Figure S6.** Histological images of the major organs of mice after intravenous administration of different-sized MONs at a dose of 5 mg kg\(^{-1}\) at 30 days postinjection. All images shown are of 100× magnification.
Figure S7. Histological images of the major organs of mice after intravenous administration of different-sized MONs at a dose of 20 mg kg\(^{-1}\) at 30 days postinjection. All images shown are of 100× magnification.
Figure S8. Excretion percentages of the MONs of different particle sizes in urine of ICR mice after tail intravenous injection. Male ICR mice were randomly separated into four groups (n = 5) and intravenously injected with MONCs (MON-Cy5.5) at doses of 5 mg kg\(^{-1}\)d. At 2, 12, 24 and 48 h, liquid urine (50 \(\mu\)L) was mixed with cool methanol (450 \(\mu\)L) to determine the fluorescence intensity \((A_u, \text{ in count per mg urine})\) and protein concentration of urine \((C_p, \text{ in mg protein per mg urine})\). The protein content in urine (expressed by \(C_p\)) was measured by the Bradford method using a Bradford Protein Assay Kit, which was purchased from Nanjing KeyGen Biotech Co. Ltd. (Nanjing, China). Furthermore, the sample percentages in each urine specimen \((P_{s,\text{urine}}, \text{ in } \%)\) could be calculated according to the volume of urine \((V_{\text{urine}}, \text{ in mL})\), the protein concentration in urine \((C_{p,\text{urine}}, \text{ in mg protein per mL urine})\), the fluorescence density of each sample in urine \((A_{s,\text{urine}} = A_u/C_{p,\text{urine}}, \text{ in count per mg protein})\), and the fluorescence intensity of each unit mass sample \((A_{s0}, \text{ in count per } \mu\text{g MONs})\), namely \(P_{s,\text{urine}} = C_{p,\text{urine}} \times V_{\text{urine}} \times A_{s,\text{urine}}/A_{s0}\).
**Figure S9.** Fluorescent linear profiles of the U87MG MCSs at a depth of 120 μm after incubating with different sized MONs for 4 h.

**Figure S10.** Tumor penetration depth analysis. The profile lines show the fluorescence changes from the tumor periphery to the interior as shown in Figure 4g.