

Supporting Information

Near-Infrared Light-Triggered “On/Off” Motion of Polymer Multilayer Rockets

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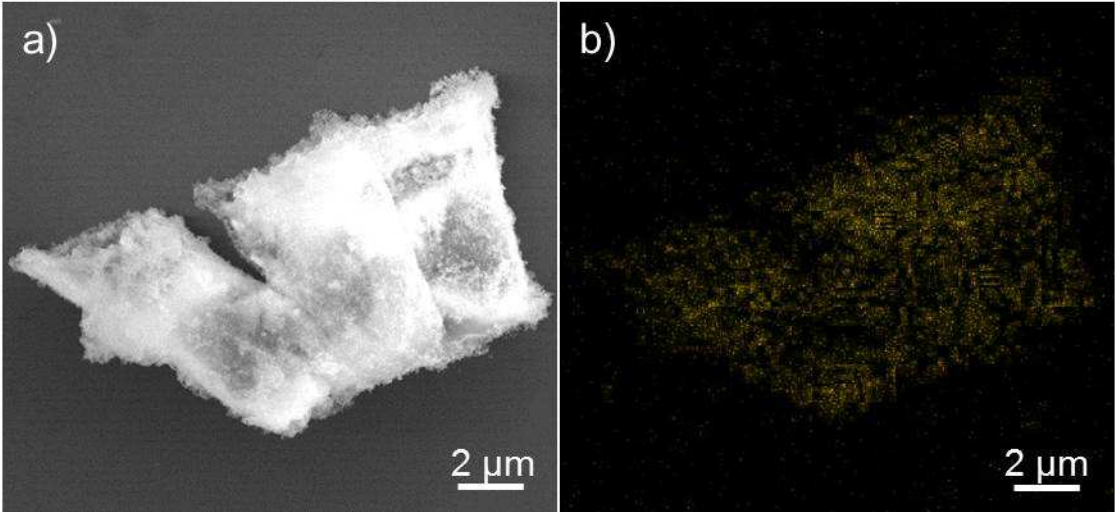
SI Video 1 The launch of a T7 AuNS (PAH/PSS)₂₀ PtNPs nanorocket in 0.1% H₂O₂ promoted by the radiation of NIR laser (the movie has been accelerated to 200% for the clear demonstration). Scale bar = 20 μm.

SI Video 2 The movement of a T7 AuNS (PAH/PSS)₂₀ PtNPs nanorocket in water under the NIR irradiation with laser power of 3 mW/μm². Scale bar = 20 μm.

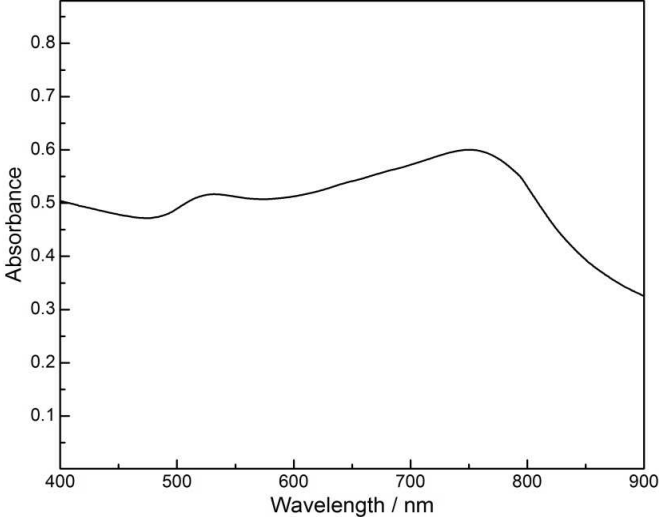
SI Video 3 The motion of a T7 AuNS (PAH/PSS)₂₀ PtNPs nanorocket toward red blood cells in 0.5% H₂O₂ solution. Scale bar = 20 μm.

SI Video 4 The motion of a T7 AuNS (PAH/PSS)₂₀ PtNPs nanorocket towards the HeLa cells in 0.1% H₂O₂. Scale bar = 10 μm.

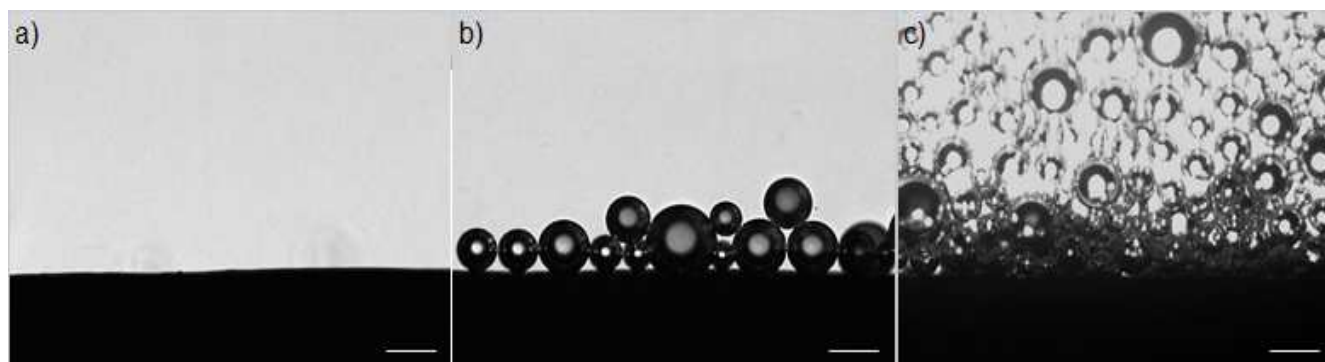
Supporting Figures



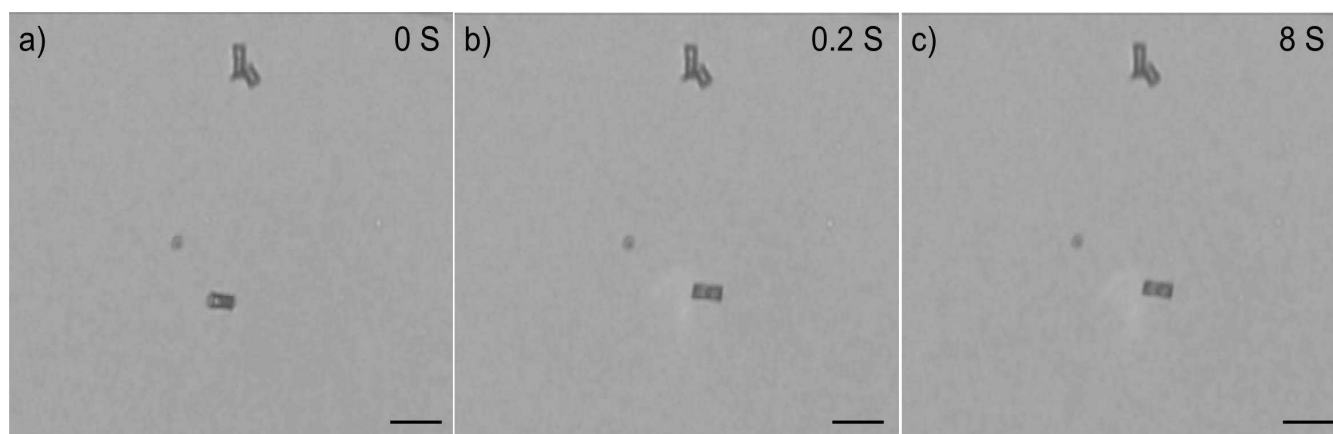
SI Figure 1. (a) SEM image of T7 AuNS (PAH/PSS)₂₀ PtNPs motor and the corresponding EDX mapping analysis of Au.



SI Figure 2. UV-vis spectrum of the T7 AuNS (PAH/PSS)₂₀ PtNPs motor.



SI Figure 3. Optical images of the glass slide coated with the (PAH/PSS)₂₀ PtNPs thin film in water (a), in 0.1% (v/v) H₂O₂ at room temperature (b), and in 0.1% (v/v) H₂O₂ at 70 °C (c). Scale bar = 50 μm.



SI Figure 4. Time-lapse images of the movement of the T7 AuNS (PAH/PSS)₂₀ PtNPs microengine under NIR laser with the power of 3 mW/μm² in pure water. Scale bar = 20 μm.