Electronic Supplementary Information for:

Small-scale heat detection using catalytic microengines irradiated by laser

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One supplementary figure and four supplementary videos:

(1). Supplementary-Figure 1.
(2). Calculation of the laser power density.
(3). Suppl Video 1 real time for Fig.1b and c.wmv.
(4). Suppl Video 2 real time for Fig.2.wmv.
(5). Suppl Video 3 real time Fig.3.wmv.
(6). Suppl Video 4 real time for Fig.4.wmv.
(7). Suppl Video 5 real time for Fig.5.wmv.

(1) Supplementary-Figure 1.

Supplementary-Figure 1. Optical image of a focused laser spot on a patterned substrate.

(2). Calculation of the laser power density.

The 980 nm laser used in our work has a maximum power of 1 W, and the diameter of the laser beam is ~0.8 cm. Thus, as a rough estimation, we can calculate the average power density by assuming a uniform power distribution in the laser spot:
Power density=total power/area of the spot=1 W/(π×0.4 cm×0.4 cm)=2 W/cm².