Laser-driven heterogeneous catalysis at room temperature: efficient formation of amides from aldehydes and amines

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Figure 1S. Representation of the setup for the RT-laser driven experiments.
Figure 2S. UV-Vis of Au/SiO$_2$ materials used as catalysts before and after reaction, showing the surface plasmon is present in reused materials. Absorbance intensities are not concentration normalized.

Figure 3S. High Resolution from the inset of Figure 3b where some Au NP aggregation is shown.
Figure 4S. HAADF-STEM images of a second reused Au/SiO$_2$ materials where Au NPs are imaged as bright spots.
Figure 5S. High resolution HAADF-STEM image of a second-reused Au/SiO$_2$ (from Figure 4S)
Energy measurements were conducted using 230V 16A energy counter perel (ref. E305EM5-G, see image below) available commercially. Comparable experiments at 5h were measured for the continuous laser assisted process and an analogous experiment at 60°C in a hot plate (650 W).

**Videos representing the stress wave generation and bubble/shockwave formation in the course of the organic reaction during laser excitation as separated files**