**Responses to editorial comments**

Manuscript, JoVE59158R1 "Shaping the amplitude and phase of laser beams by using a phase-only spatial light modulator"

Editorial comments:

1. Note that all text written in equation editor will be formatted differently than the rest of the text (including inline text). Is it possible to rewrite at least the inline text in the same font as the rest?

2. 1, 3.3: Is it possible to include sample MATLAB code for these steps? It can be included as supplemental material in your submission.

3. 2 and 3.1-3.2: Please include more detail here, as it will be the bulk of what we film and we need enough detail to make a shooting script. E.g., how exactly is the phase pattern sent to the SLM in 2.5.2? How are polarizers aligned in 3.1.1 and 3.1.2? Also, please explicitly refer to Figure 2 during these steps, especially as it appears some equipment is named differently in the protocol and in the figure.

4. Please include at least 10 references.

Responses to editorial comments:

1. In the present version of the manuscript all text written in equation editor (including inline text) was rewritten with a format equal to the text (Calibri 12).

2. MATLAB code for points 1 and 3.3 of the protocol has been generated and included as supplemental material named “MATLAB\_code\_1.m” and “MATLAB\_code\_3.m”, respectively.

3. To improve this aspects the following sentences have been added/modified in the protocol section:

2.5. In order to send a phase pattern to the SLM, follow standard communication protocols given by the SLM’s manufacturer to connect and control the SLM with the computer. Common protocol for this purpose includes the use of a calibration curve to transform the values in radians (due to mathematical operations with angles) into gray level ones, which the electronic control unit of the SLM will finally convert into voltage levels. Additionally, as SLM is connected to computer as external device with its own screen, an extension of the computer screen is usually necessary, as well as a proper program to send the corresponding gray level images to this extra screen. An example of these codes are also included as supplemental material (please, see MATLAB\_code\_2.m).

3.1.1. Place and align the rotation angle of the first optical polarizer, located just before the SLM (please, see **Figure 2**). To set the rotation angle of the first polarizer, visually look for the maximum and minimal light transmittance in the CCD camera (placed at the output plane of the imaging system), depending on the rotation of the polarizer. Write down the two corresponding angles of the polarizer. Fix the final angle of the polarizer to that between the two previous-recorded angles.

3.1.2. Place and align the rotation angle of the second optical polarizer, located after the Fourier plane of the imaging system (please, see **Figure 2**). To set the rotation angle of the second polarizer, visually look for the sharpest and most blurred images in the CCD camera (placed at the output plane of the imaging system) after sending the phase pattern  to the SLM. Write down the two corresponding angles of the polarizer. Fix the final angle of the second polarizer to that between the previous-recorded angles.

3. The following references were added to the manuscript:

9. Shao, Y., Qin, W., Liu, H., Qu, J., Peng, X., Niu, H., and Gaob, B. Z. Addressable multiregional and multifocal multiphoton microscopy based on a spatial light modulator. Journal of Biomedical Optics. 17(3), 030505 (2012).

10. Mendoza-Yero, O., Carbonell-Leal, M., Mínguez-Vega, G., and Lancis, J. Generation of multifocal irradiance patterns by using complex Fresnel holograms. Optics Letters. 43 (5), 1167-1170 (2018).

11. Kuang, Z., Liu, D., Perrie, W., Cheng, J., Shang, S., Edwardson, S. P., Fearon, E., Dearden, G., and Watkins, K. G. Diffractive Multi-beam Ultra-fast Laser Micro-processing Using a Spatial Light Modulator(Invited Paper). Chinese Journal of Lasers. 36(12), 3093-3115 (2009).

12. Kuang, Z., Perrie, W., Leach, J., Sharp, M., Edwardson, S. P., Padgett, M., Dearden, G., and Watkins, K. G. High throughput diffractive multi-beam femtosecond laser processing using a spatial light modulator. Applied Surface Science. 255, 2284–2289 (2008).