Supplementary Information

A photoactivatable light tracer†

Xiaoming Liu, Yang Zhang, James D. Baker and François M. Raymo*

• Fabrication of arrays of microscaled pyramids...............................................................S2
• Simulation of electromagnetic radiation propagating in a microscaled pyramid..............S2
• Three-dimensional representations of the fluorescence distribution in a microscaled pyramid........S2

Laboratory for Molecular Photonics, Departments of Biology and Chemistry, University of Miami, 1301 Memorial Drive, Coral Gables, FL 33146-0431, USA. E-Mail: fraymo@miami.edu
Fig. S1. Fabrication of doped PDMS pyramids (a) and undoped PDMS pyramids overlaying a doped PBMA film (b).

Fig. S2. FDTD simulations (scale bar = 5 µm) of the spatial distribution of the radiation intensity within three representative planes (a–c) orthogonal to the main axis of a PDMS pyramid together with the dependence (d) of the average radiation intensity on the position of the simulated plane relative to the pyramid base.

Web Enhanced Object

Video S1. Three-dimensional fluorescence distribution in a PDMS pyramid, doped with I, reconstructed from CLSM images recorded with a $\lambda_{ex}$ of 514 nm ($\lambda_{em}$ = 525–600 nm) by scanning the focal plane across the PDMS substrate towards the pyramid tip in steps of 1.33 µm.

Web Enhanced Object

Video S2. Three-dimensional fluorescence distribution in a PDMS pyramid, doped with I, reconstructed from CLSM images recorded, after activation ($\lambda_{Ac}$ = 405 nm, 0.11 mW, 30 s), with a $\lambda_{ex}$ of 633 nm ($\lambda_{em}$ = 650–720 nm) by scanning the focal plane across the PDMS substrate towards the pyramid tip in steps of 1.33 µm.