Supporting information for:

Synthesis and Structure-Activity Relationship of Silyl-based

Two-Photon Initiators for 3D Lithography

Zhiquan Li,⁺ Arnulf Rosspeintner,[±] Peng Hu,⁺ Guigang Zhu,⁺ Yuansheng Hu,⁺ Xiang Xiong,⁺ Ruwen Peng,⁺ Mu Wang,⁺ Xiaoya Liu,⁺ and Ren Liu^{*,+} [†] *The Key Laboratory of Food Colloids and Biotechnology, Ministry of Education, School of Chemical and Material Engineering, Jiangnan University, Wuxi, Jiangsu, P. R. China* [‡] Department of Physical Chemistry, University of Geneva, 30, Quai Ernest Ansermet, *CH-1211 Geneva, Switzerland* [¶]National Laboratory of Solid State Microstructures and School of Physics, *Collaborative Innovation Center of Advanced Microstructures, Nanjing University, Nanjing 210093, China* E-mail: liuren@jiangnan.edu.cn



Figure S1: Absorption and emission spectra of **3a-c** in *n*-octane, *n*-butyl ether, butyl acetate, tetrahydrofurane, methyl-*i*-butyl ketone and butyronitrile (from below to above, thick grey lines). In addition the decomposition into the individual vibronic transitions is shown (dashed lines). The lowest energetic absorption transition (filled red) and highest energetic emission transition (filled blue) were used for the solvatochromic analysis.



Figure S2: Absorption spectra of **3a-c** in THF.



Figure S3: Absorption spectra of cis and trans form of **3a**. In addition, the difference spectrum (species C in the ns-TA spectra of the main manuscript) is also shown.



Figure. S3 Image of the processing windows of 3b at a writing speed of 50 μ m/s. Insert: line width of the

fabricated structures under different laser intensities.