

Supplementary Information:

Monitoring the Response of a Model Protocell to Dye and Surfactant Molecules by Second Harmonic Generation and Fluorescence Imaging

Bifei Li, † Jianhui Li, † Shujiao Chen, † Qunhui Yuan^{§, *}, Chao Fang ^{†, *} and Wei Gan ^{†, *}

†Shenzhen Key Laboratory of Flexible Printed Electronics Technology, School of Science, Harbin Institute of Technology (Shenzhen), University Town, Shenzhen 518055, Guangdong; School of Chemistry and Chemical Engineering, Harbin Institute of Technology, Harbin 150001, Heilongjiang, China

§Shenzhen Key Laboratory of Flexible Printed Electronics Technology, School of Materials Science and Engineering, Harbin Institute of Technology (Shenzhen), University Town, Shenzhen 518055, Guangdong, China

*Corresponding Author: (Q.H. Y.) E-mail: yuanqunhui@hit.edu.cn; (C. F.) E-mail: fangchao@hit.edu.cn; (W. G.) ganwei@hit.edu.cn

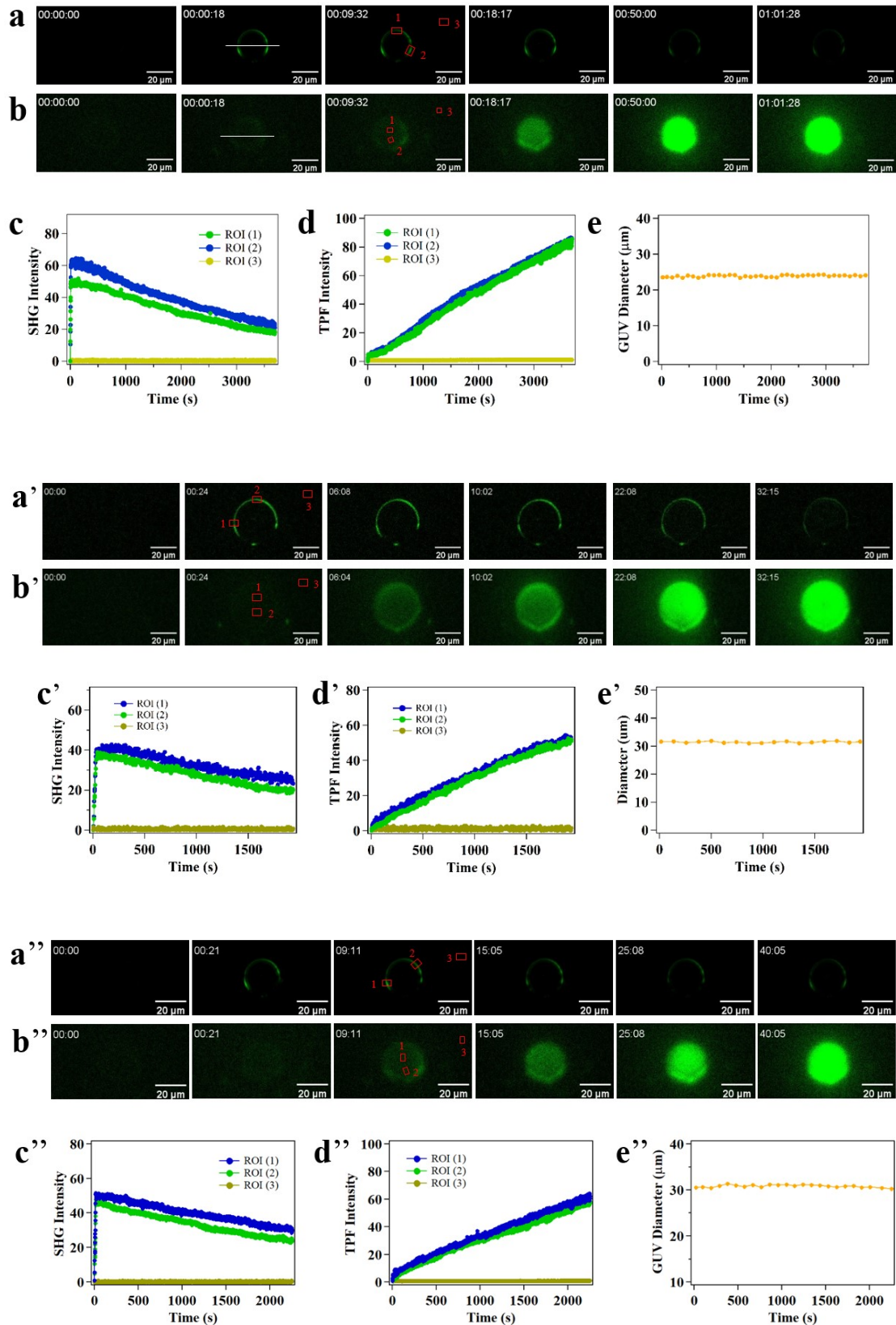


Figure S1. Results of three second harmonic generation (SHG) and two-photon fluorescence (TPF) imaging experiments with GUV after the approaching of 20 μm D289. Recorded SHG (a, a', a'') and TPF (b, b', b'') images. (c, c', c'') Change of the mean SHG intensities in the regions of interest (ROIs) marked in frame a, a' and a'', respectively. (d, d', d'') Change of the mean TPF intensities in the ROIs marked in frame b, b', and b'', respectively. (e, e', e'') Change of the GUV diameter shown in frame a, a' and a'', respectively.

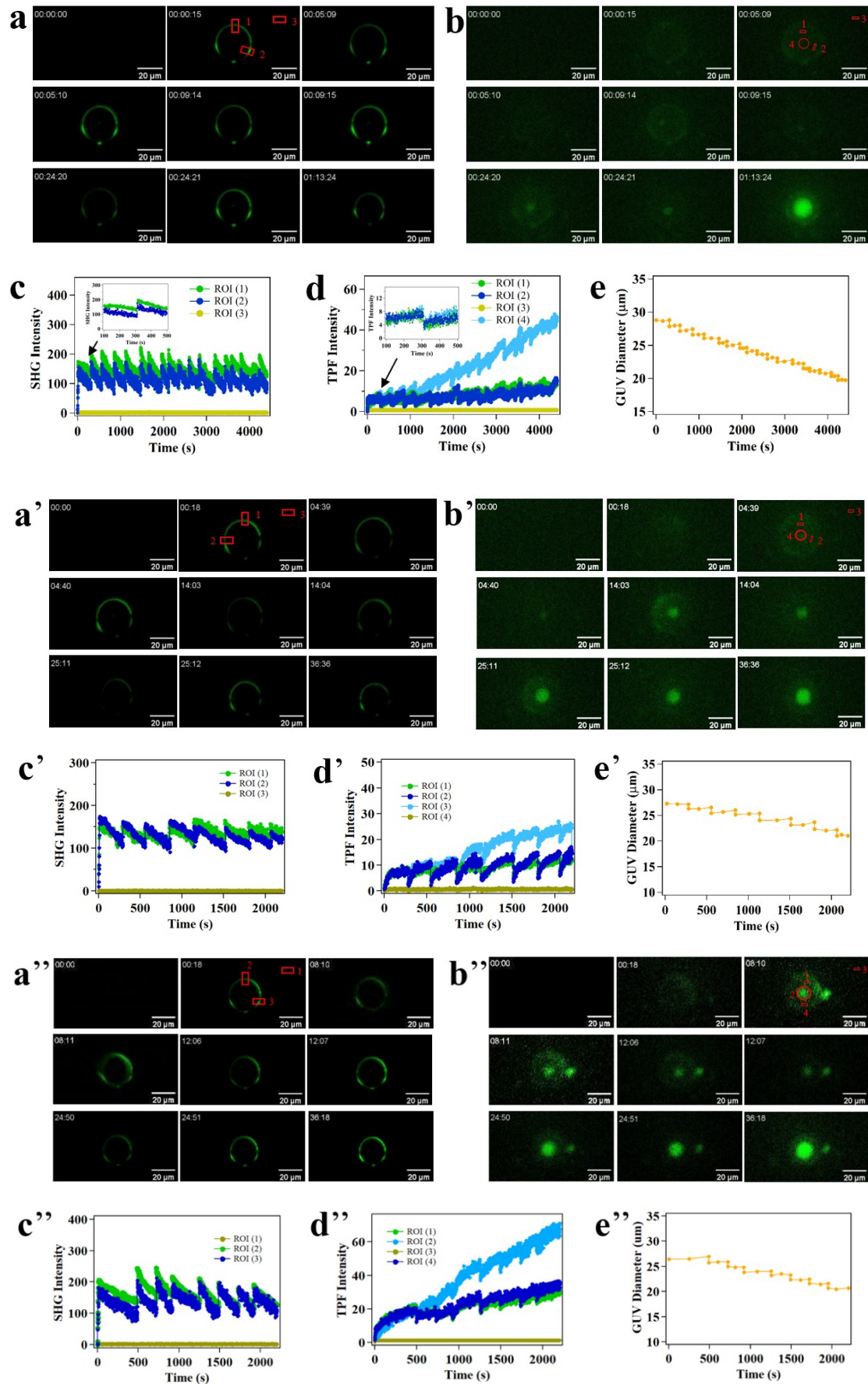


Figure S2. Results of three SHG and TPF imaging experiments with GUV after the approaching of 80 μM D289. Recorded SHG (a, a', a'') and TPF (b, b', b'') images. (c, c', c'') Change of the mean SHG intensities in the ROIs marked in frame a, a' and a'', respectively. (d, d', d'') Change of the mean TPF intensities in the ROIs marked in frame b, b', and b'', respectively. (e, e', e'') Change of the GUV diameter shown in frame a,

a' and a'', respectively.

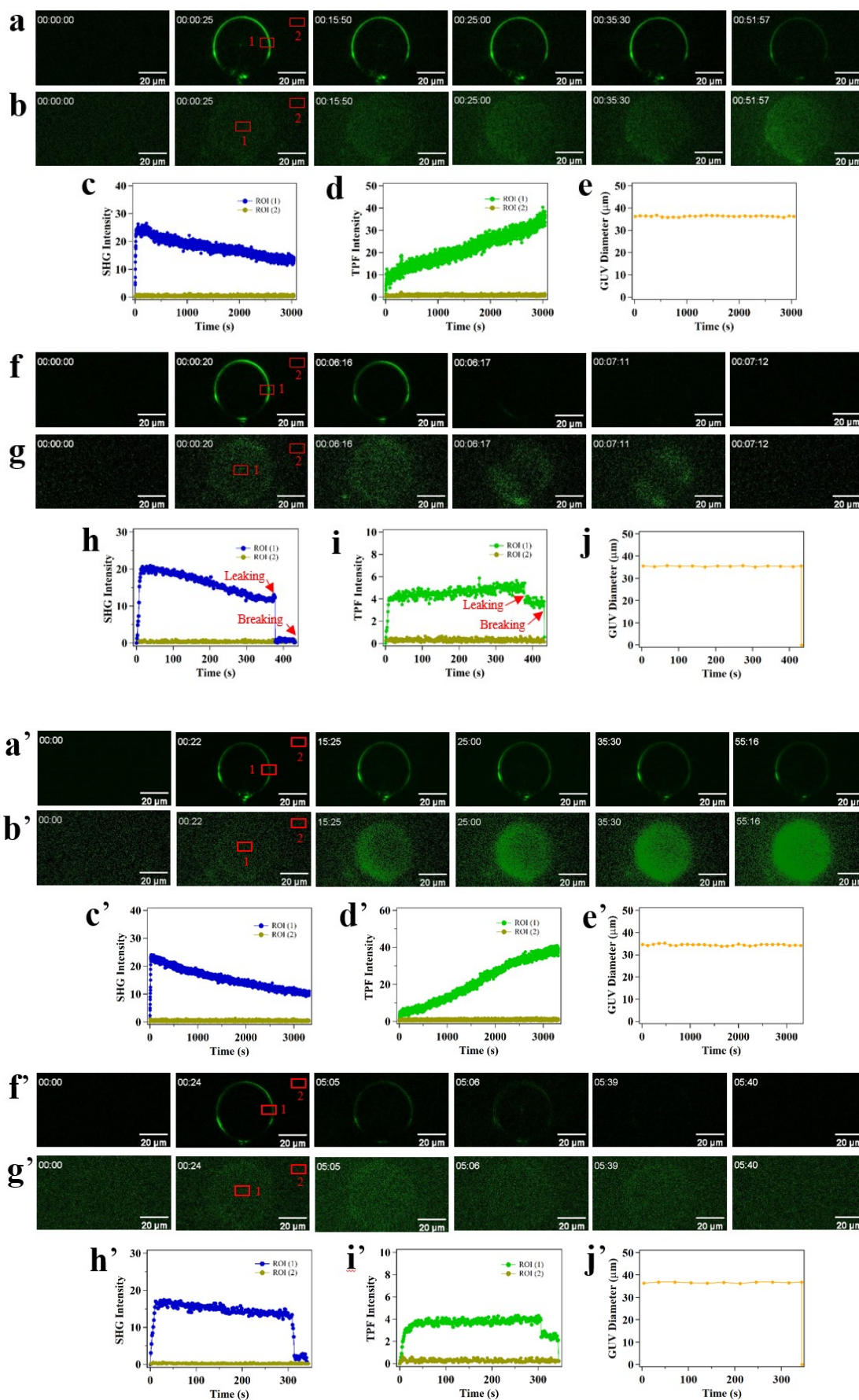


Figure S3. Results of two SHG and TPF imaging experiments with GUV after the approaching of 10 μM D289 and 5 μM CTAB. SHG (a, a') and TPF (b, b') images. (c, c') Change of the mean SHG intensities in the ROIs

marked in frame a and a'. (d, d') Change of the mean TPF intensities in the ROIs marked in frame b and b'. (e, e') Change of the GUV diameter. The same experiments and analyses performed with 10 μM D289 and 20 μM CTAB are shown in frames f, f', g, g', h, h', i, i' and j, j'.