Immobilization of water soluble HRP within p-N-Isopropylacrylamide microgel particles for the usage in organic media

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supporting information

CLSM was used to localize the FITC-labeled enzyme HRP within the microgel particles after immobilization by solvent exchange. Figure S1 shows the fluorescence intensity profiles for the redispersion in buffer and isopropanol. This supports the information that nearly no enzyme is at the p-NIPAM particles after redispersion in buffer while all of the enzyme is located at the microgel particles after redispersion in isopropanol.

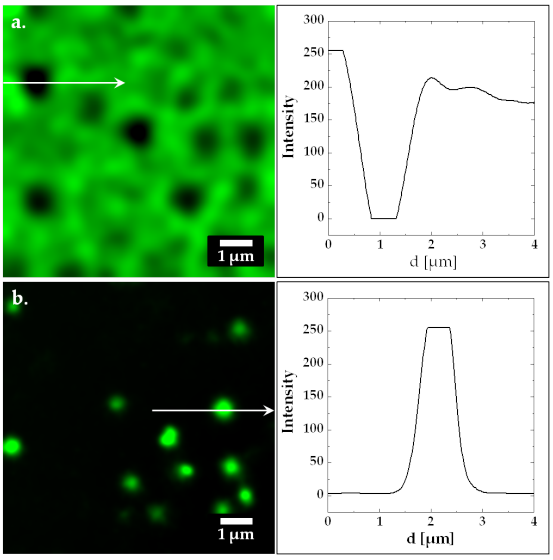

Figure 1: Fluorescence intensity profiles after redispersion in buffer (a) and in isopropanol (b).

In order to support the results from z-stack measurements made by CLSM, fluorescence intensity profiles for three different z-positions are shown in figure S2. Even the profile in the middle shows a nice maximum which proves that there is also enzyme present in the center of the microgel particles.

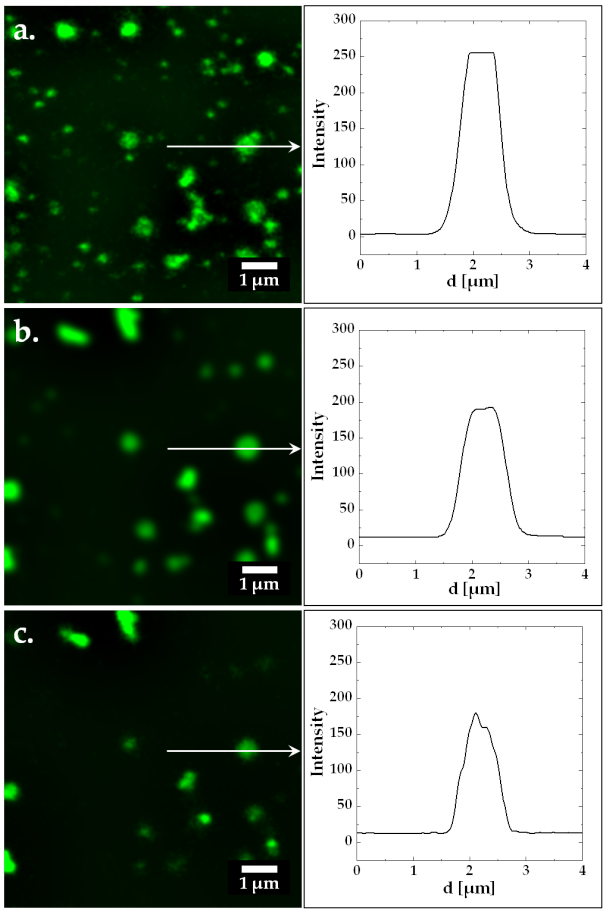

Figure 2: Fluorescence intensity profiles after redispersion in isopropanol at z=4 (a), z=16 (b) and z=28 (c) out of 32 measurements.

In order to support the results from CD measurements, UV-vis absorption spectroscopy was done in the Soret region (λ = 310 to 450 nm).

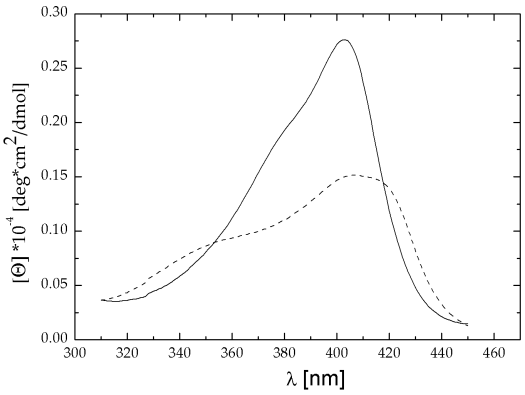

Figure 3: UV-vis spectra of HRP in buffer (solid line) and in isopropanol/buffer (dashed line).