Electronic Supplementary Material (ESI) for Physical Chemistry Chemical Physics.

SUPPLEMENTARY MATERIAL

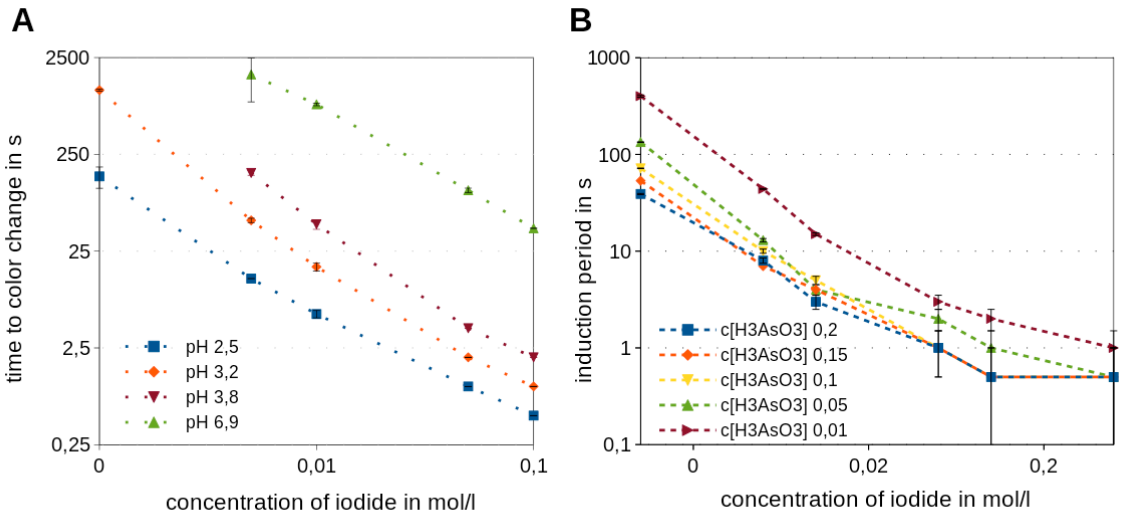


Fig. S1. Induction period of the iodate-arsenous acid clock reaction in a 96 well microtiter plate under different conditions. (A) Induction period at different pH values as a function of the inducer concentration KI for a constant arsenous acid concentration of 0.05 mol/l in a double logarithmic plot. (B) Induction period for different arsenous acid concentrations as a function of the inducer concentration KI for a constant pH value of 3.8 in a double logarithmic plot. The iodate concentration is 0.15 mol/l in all cases.

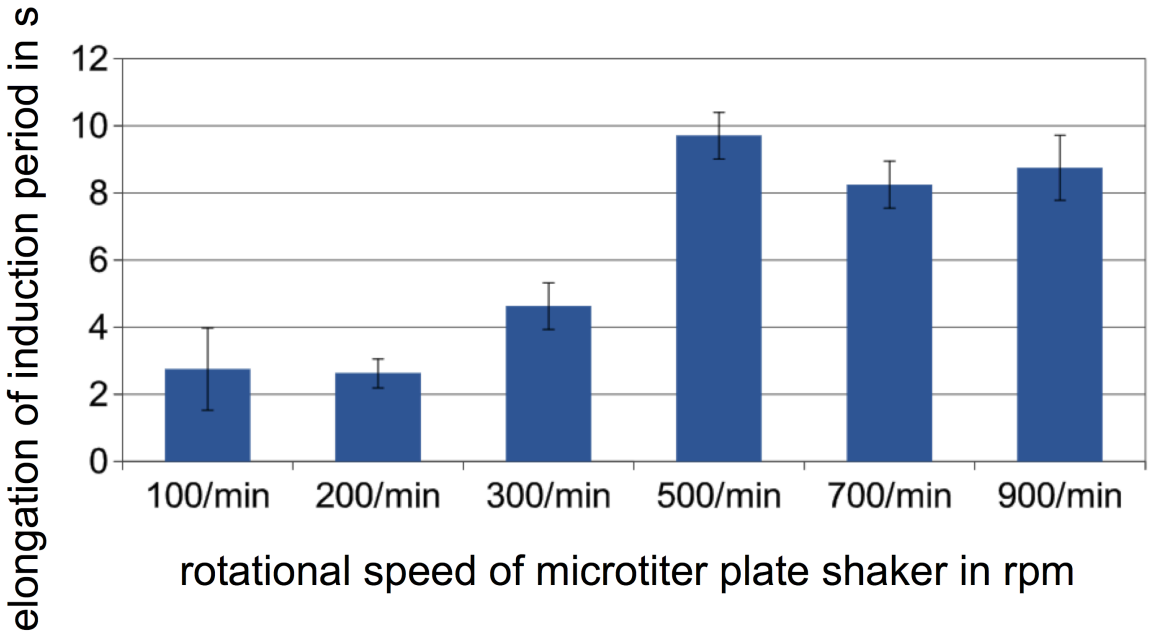


Fig. S2. Induction period of the iodate-arsenous acid clock reaction at different rotational speeds of the 96 well plate shaker. The elongation of the induction period compared to non-shaken samples are shown. The induction period increases with increasing rotational speed and reaches saturation for values above 500 rotations per minute.

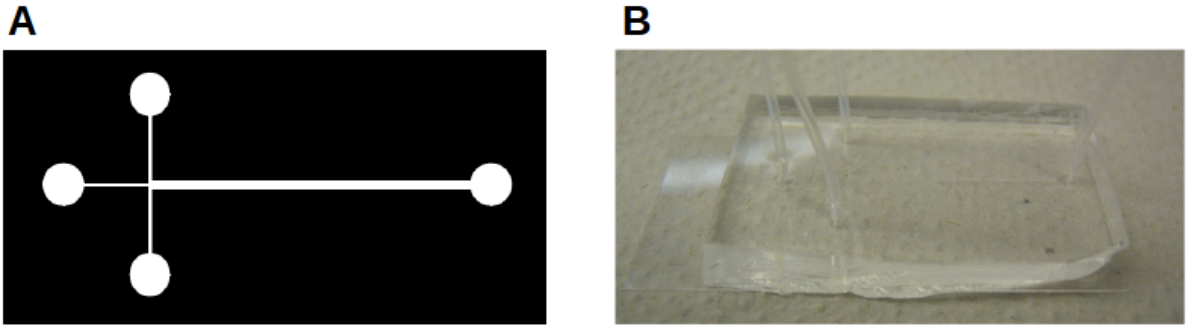


Fig. S3. Microfluidic channel. (A) Layout of the microfluidic channel. (B) Photograph of the microfluidic channel with Teflon tubing connected to the inlet.

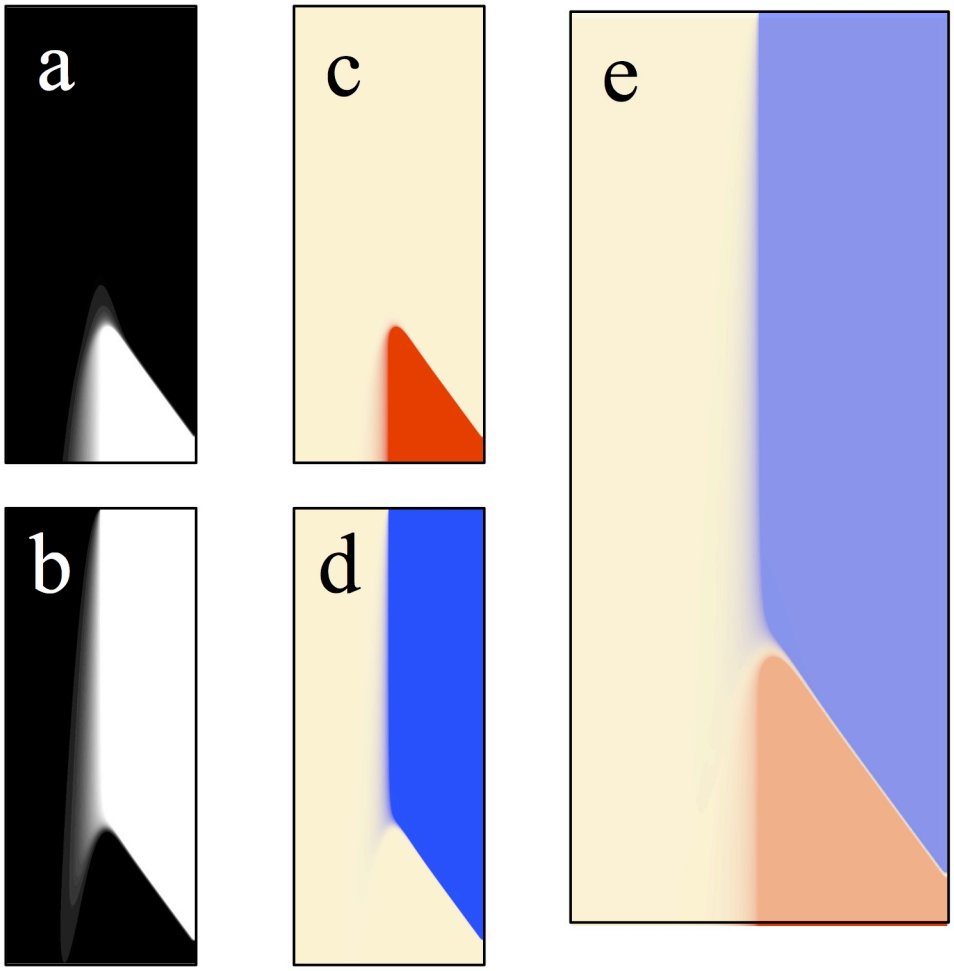
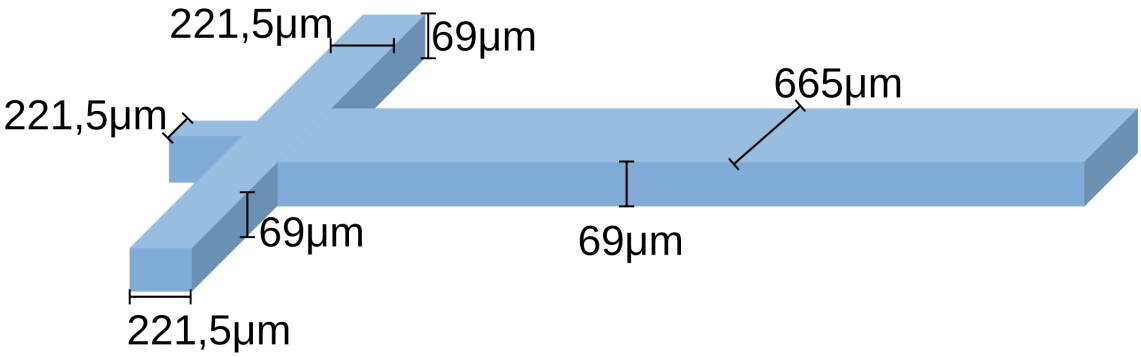


Fig. S4. Construction of Fig. 4. The numerical simulation yields two concentration fields for the space-time behavior of the autocatalytic specie *B* and the substrate *A* displayed as grayscale images in (A) and (B), respectively, where white represent high and black low concentrations. These images are re-colored as in (C) and (D), and finally superimposed as shown in (E). Figure S4E corresponds to the Fig. 4B.



microchannel dimensions in µm measured with Dektak 3ST

Fig. S5. Dimensions of microfluidic channel used in our experiments as determined with a Dektak 3ST profilometer from the photoresist microstructure used for PDMS casting of the microfluidic chips.