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

Turing patterns on radially growing domains: Experiments and simulations

Electronic Supplementary Information

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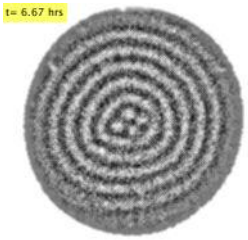
1 Introduction

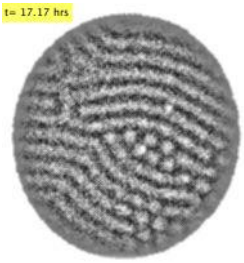
This document contains animations of Turing pattern growth, both from experiments and simulations. Specifically, the animations are of the Turing patterns shown in Figure 2 (experimental) and Figure 3 (simulated) in the main text. To view these animations, download this document and open in Adobe Acrobat Reader. To play an animation, click on the desired video. The animations require Adobe Flash Player to view.

2 Experimental Turing pattern growth

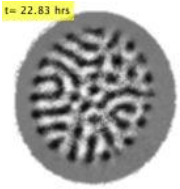
The Turing patterns shown in these animations are the experimental patterns shown in Figure 2 of the main text. For each animation in this section, frames are experimental images taken 10 minutes apart, and the frame rate is 10 fps. Thus, for each second in the animations, 100 minutes have passed in the experiment. The elapsed time (in hours) is shown in the top left corner for reference. The linear growth rate (in mm/h) is included in the text below each animation.



The Turing pattern above is growing at 0.5 mm/h. The total growth time is 416 minutes. The final pattern is shown in the main text in Figure 2a.



The Turing pattern above is growing at 0.2 mm/h. The total growth time is 1041 minutes. The final pattern is shown in the main text in Figure 2b.



The Turing pattern above is growing at 0.1 mm/h. The total growth time is 1385 minutes. The final pattern is shown in the main text in Figure 2c.

3 Simulated Turing patterns

The Turing patterns shown in the animations below are numerically simulated Turing patterns shown in Figure 3 of the main text. For each animation, two frames correspond to a single 10 time unit step, and the frame rate is 10 fps. So, each second in these animations correspond to an elapsed 50 t.u. The linear growth rate in space units/time units (s.u./t.u.) is included in the text below each animation. Each Turing pattern grows to a final size of 100 s.u.

The Turing pattern above is growing at a rate of 0.75 s.u./t.u. The final pattern is shown in the main text in Figure 3a.

The Turing pattern above is growing at a rate of 0.32 s.u./t.u. The final pattern is shown in the main text in Figure 3b.

The Turing pattern above is growing at a rate of 0.25 s.u./t.u. The final pattern is shown in the main text in Figure 3c.