

Electronic Supplementary Information Description:

The movies supplied in the Supporting Information section are all produced by the combination of consecutive snapshots taken of the reactions, carried out in a petri dish, from a top view. In real time, a snapshot was taken every 5 seconds and in the moviemaker program (iMovie) the frame was set to last for 0.2 seconds. Therefore, the movies portray the evolution of the patterns 25 times faster than real time. All reactions are performed at 20 °C.

Movie “**Spirals**” initial conditions: 1% agar, $[\text{Hg}^{2+}] = 0.25 \text{ M}$, $[\text{I}^-] = 5.0 \text{ M}$.

Movie “**Triple Wave Ripple**” initial conditions: 1% agar, $[\text{Hg}^{2+}] = 0.23 \text{ M}$, $[\text{I}^-] = 4.0 \text{ M}$.

Movie “**Target**” initial conditions: 1% agar, $[\text{Hg}^{2+}] = 0.26 \text{ M}$, $[\text{I}^-] = 3.0 \text{ M}$.

These 3 movies portray the spatiotemporal evolution of each pattern, along with their transition into chemical turbulence. The dissolution of the precipitate observed is due to excess iodide ions (outer electrolyte).

Movie “**Target Collision**” initial conditions: 1% agar, $[\text{Hg}^{2+}] = 0.22 \text{ M}$, $[\text{I}^-] = 1.0 \text{ M}$.

This movie illustrates the merging of two target wave fronts upon head-to-head collision.