

Electronic Supplementary Material

File exp.avi

Title Emerging precipitate pattern

Legend Precipitate pattern emerges behind reaction fronts from two initiation points. Diffusive instability leads to the formation of stationary precipitate-free gaps from cusps and upon front annihilation. Field view: 18.5 cm x 13.9 cm, frame rate: 10 fps, acceleration rate: 6000.

Keywords Precipitate pattern, self-organization, emergence of pattern, diffusive instability, chemical front

File calc.avi

Title Calculated precipitate pattern

Legend Calculated precipitate pattern emerges behind reaction fronts from two initiation points. Lateral instability leads to the formation of stationary precipitate-free gaps from cusps and upon front annihilation. Field view: 9 cm x 9 cm.

Keywords Precipitate pattern, self-organization, emergence of pattern, diffusive instability, chemical front

File model.pdf

Title Reaction-diffusion model

Legend Derivation of the reaction-diffusion model based on the empirical rate law of the autocatalysis with fast equilibrium for binding of the autocatalyst hydrogen ion and instantaneous precipitate formation.

Keywords Reaction-diffusion model, empirical rate law, dimensionless model