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Visualizing dynamical systems with fire fronts[1] NIKLAS MANZ, The College of Wooster, FLAVIO FENTON, Georgia Institute of Technology, School of Physics and Astronomy — Simple nonlinear table-top experiments are great media to explore spatiotemporal properties of dynamical systems. We are using a one-dimensional oil-candle system and two-dimensional matchstick arrays to experimentally investigate the behavior of excitable reaction-diffusion systems. In these setups, propagating fire fronts can display complex spatial dynamics by varying the oil viscosity and wick material of the candle system or the match type, arrangement, and slope of the matchstick array system.

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