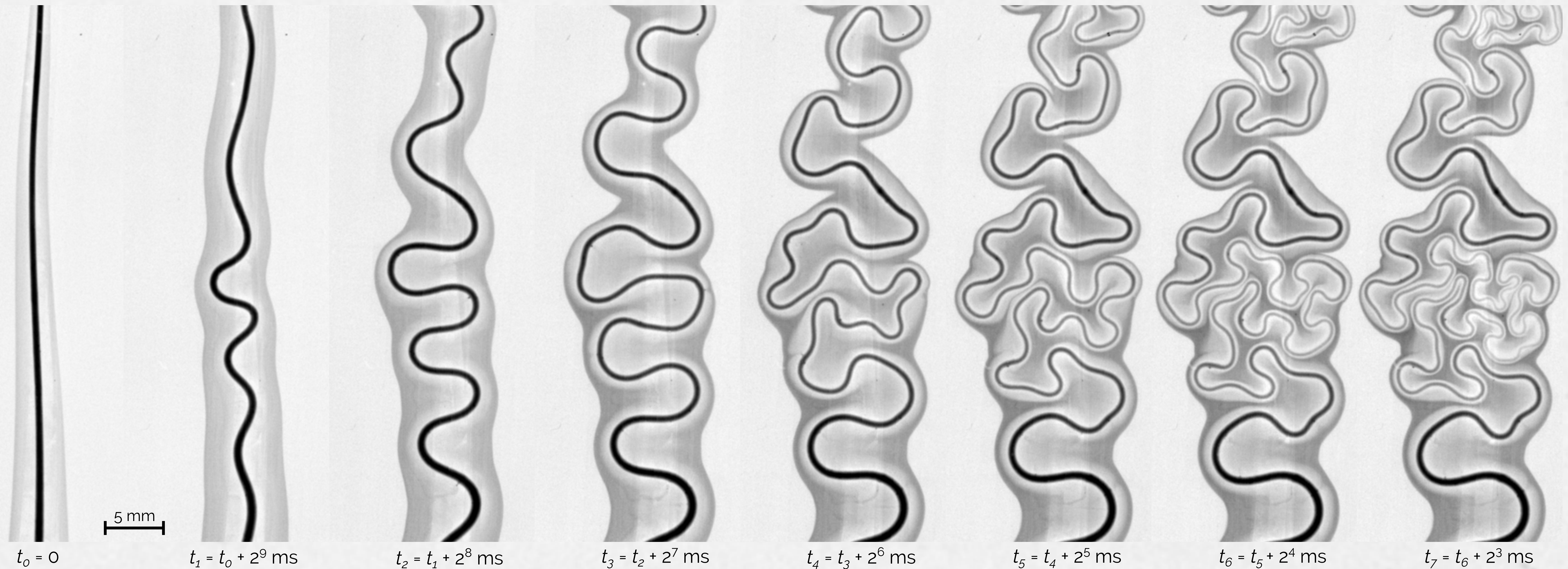
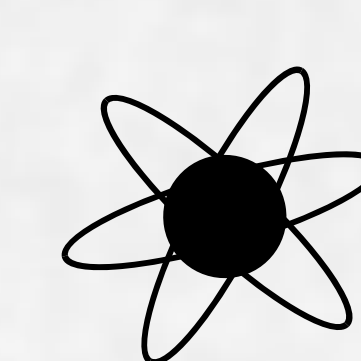
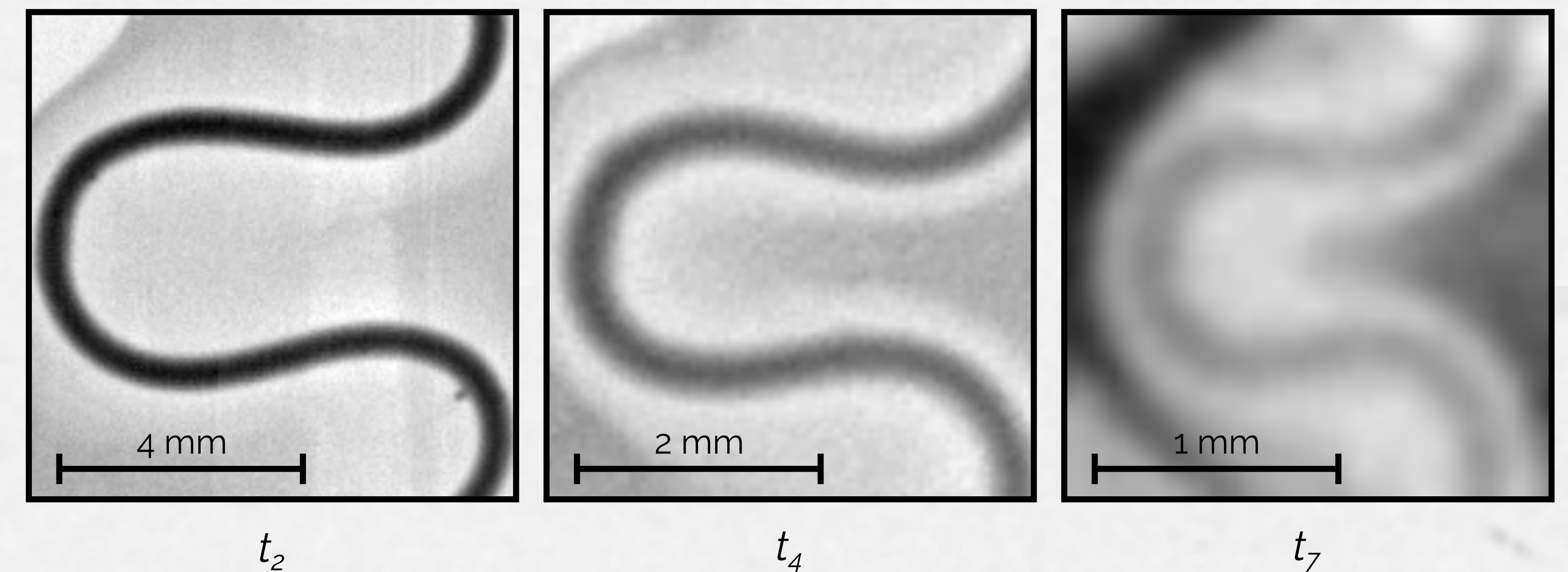


The Wrinkling Cascade of a Floating Thread



A thread of viscous mineral oil is deposited at the surface of a clean water bath. Because of the lower surface tension of oil, the thread spreads, pulled by Marangoni forces. The motion soon destabilizes in a catastrophic way, the surface tension gradient being steepened at the extrema of the thread corrugations. The phenomenon proceeds self-similarly down to ever smaller scales in an accelerated cascade finally interrupted by the diffusive smearing of the oil in the bath.



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