

Abstract Submitted
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Delay of Disorder by Diluted Polymers CHRISTIAN WAGNER, Universitaet des Saarlandes, ANDRIY KITYK, Technical University of Czestochowa — We study the effect of diluted flexible polymers on a disordered capillary wave state. The waves are generated at an interface of a dyed water sugar solution and a low viscous silicon oil. This allows for a quantitative measurement of the spatio-temporal Fourier spectrum. The primary pattern after the first bifurcation from the flat interface consists of squares. With increasing driving strength we observe a melting of the square pattern. It is replaced by a weak turbulent cascade. The addition of a small amount of polymers to the water layer does not affect the critical acceleration but shifts the disorder transition to higher driving strengths and the short wave length - high frequency fluctuations are suppressed.

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