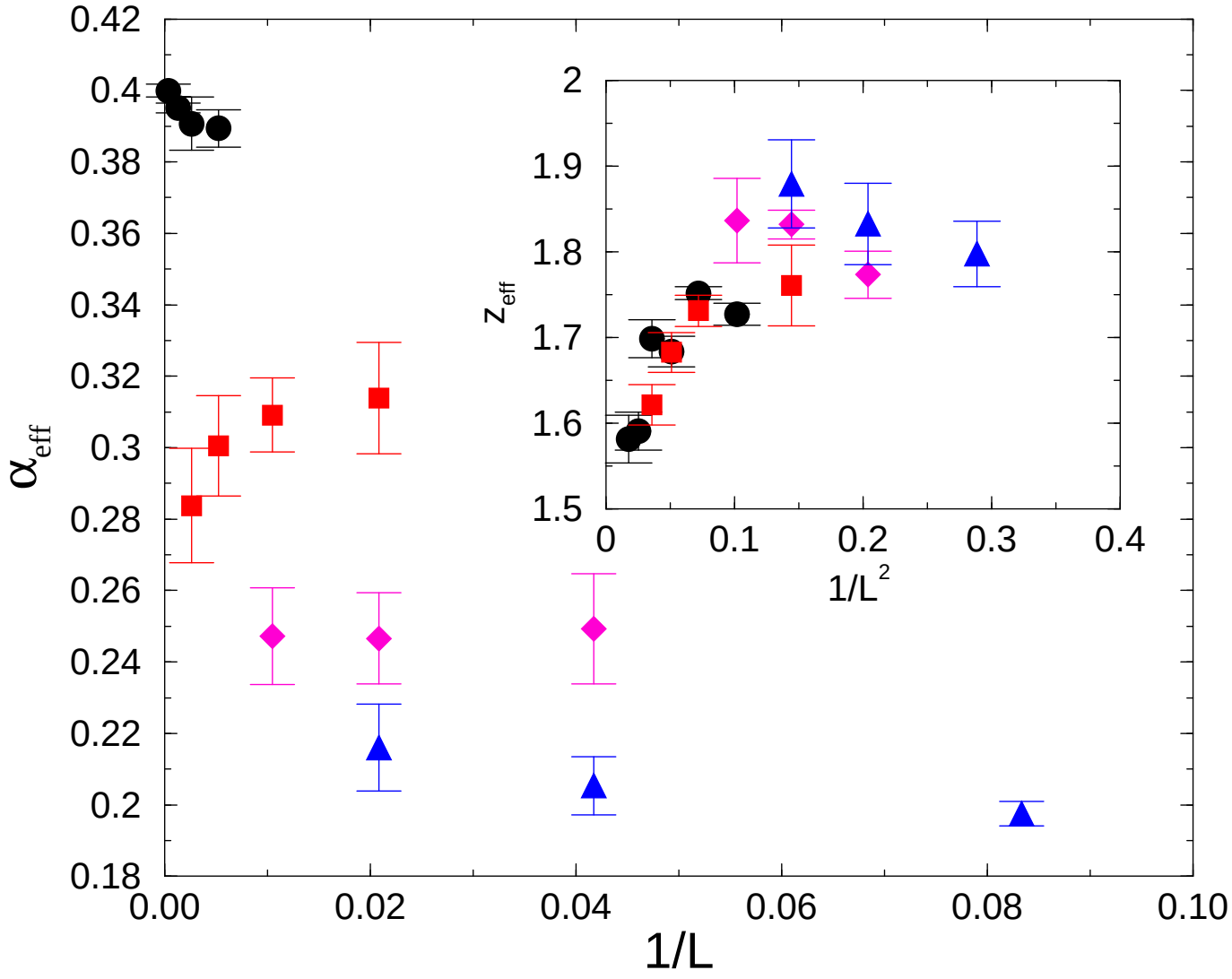
KPZ scaling exponents in higher dimensions

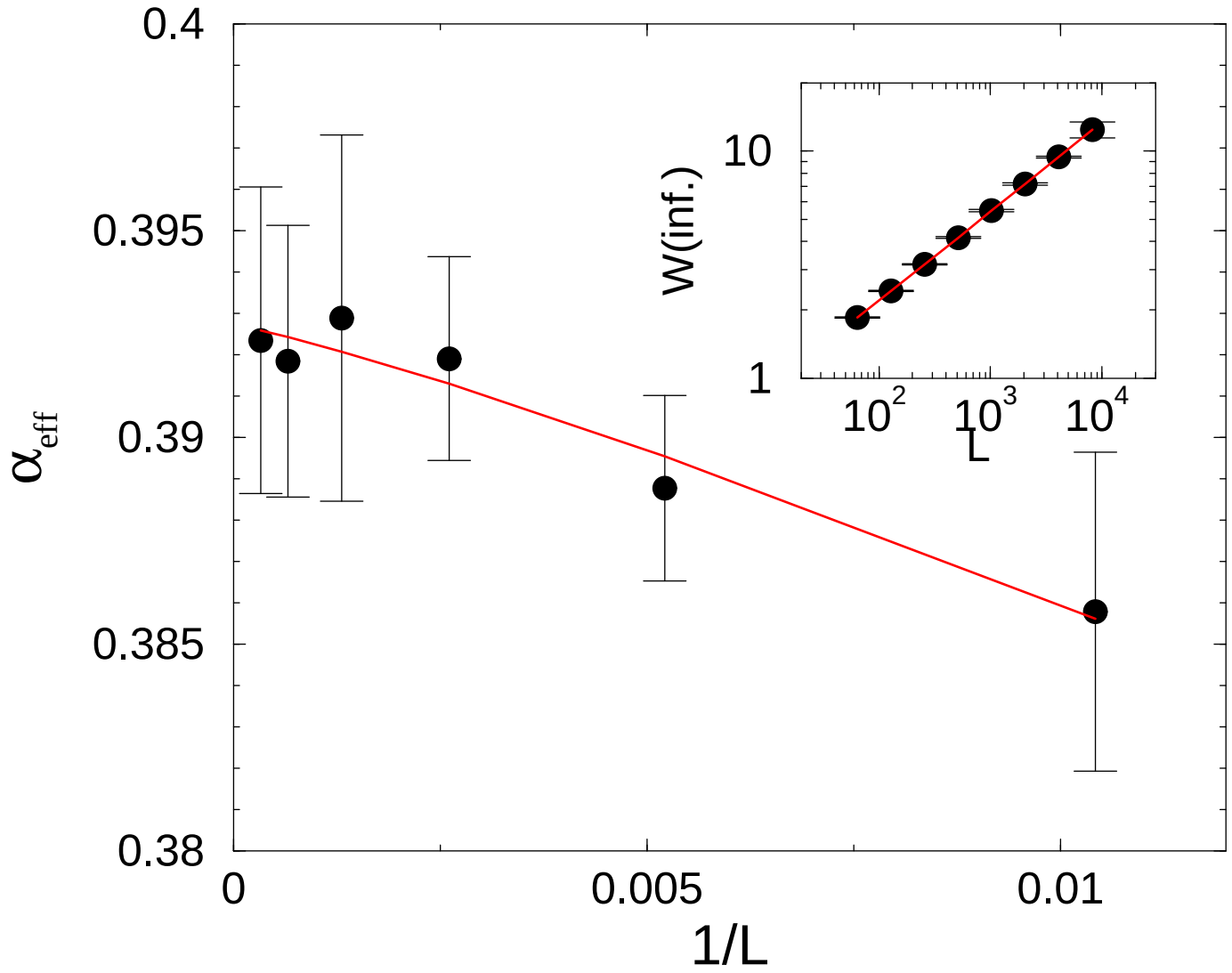
KPZ scaling exponents in dimensions $d = 2, 3, 4, 5$

Odor et al., Phys. Rev. E **81** (2010) 031112



KPZ roughness exponent in dimension $d = 2$

Kelling and Odor, Phys. Rev. E **84** (2011) 061150



Growth models

A TWO-DIMENSIONAL GROWTH PROCESS

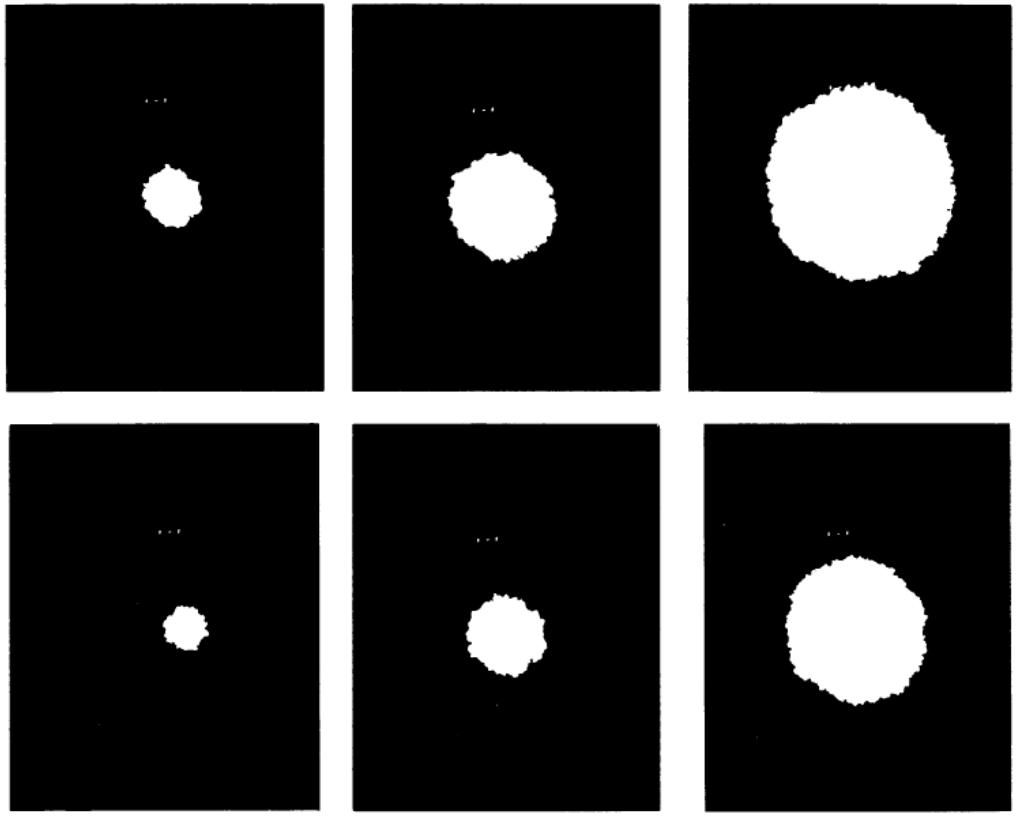
MURRAY EDEN

MASSACHUSETTS INSTITUTE OF TECHNOLOGY

Proceedings of the 4th Berkeley Symposium on Mathematical Statistics and Probability
Volume 4: Contributions to Biology and Problems of Medicine
Berkeley: University of California Press, 1961

Simulation of clusters up to $2^{15} = 32768$ cells

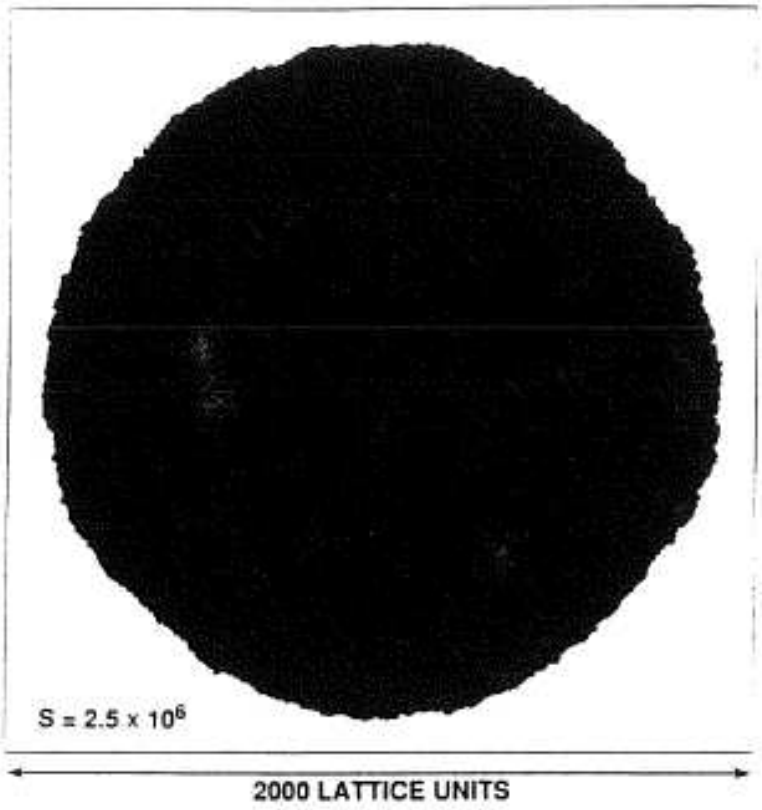
M. Eden, 1961

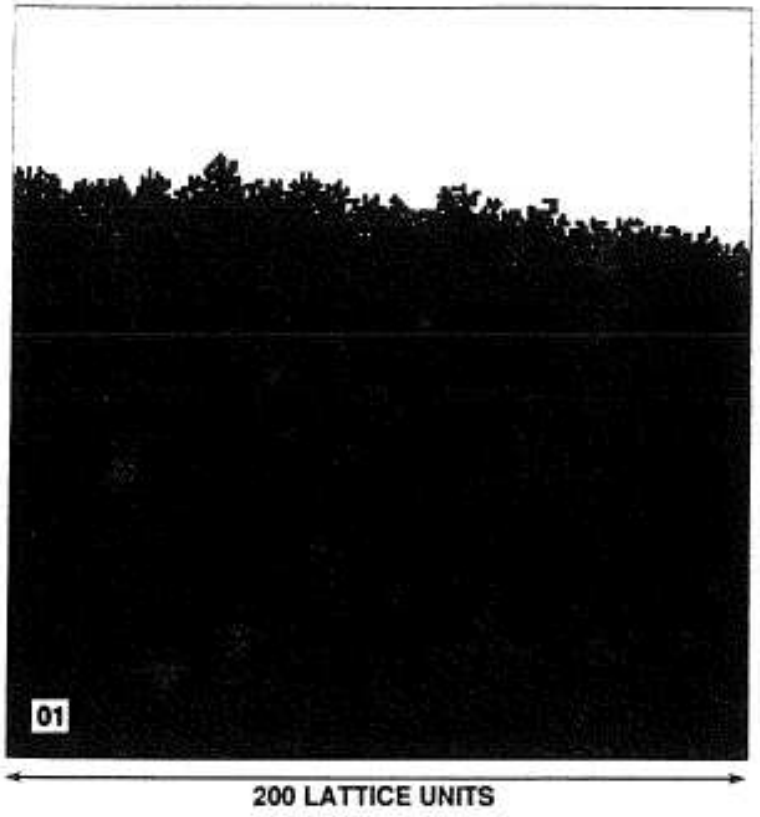


”It is to be seen that the colony is essentially circular in outline. Needless to say, there are a number of properties of each growing colony as well as properties of the ensemble that may be worth examining, for example, moments, the eccentricity of the configurations, the *roughness of the edge*.”

Cluster shape and edge roughness

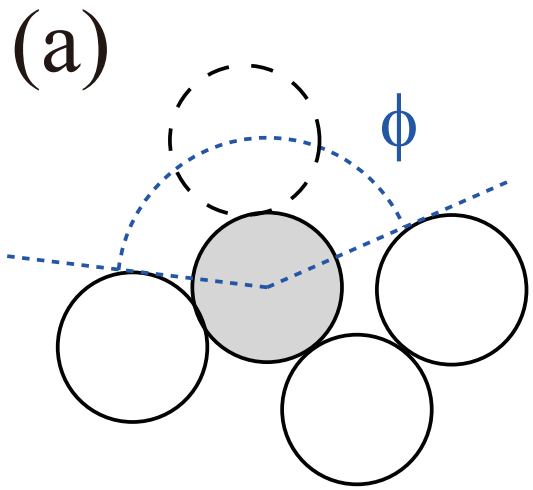
P. Meakin (1989)

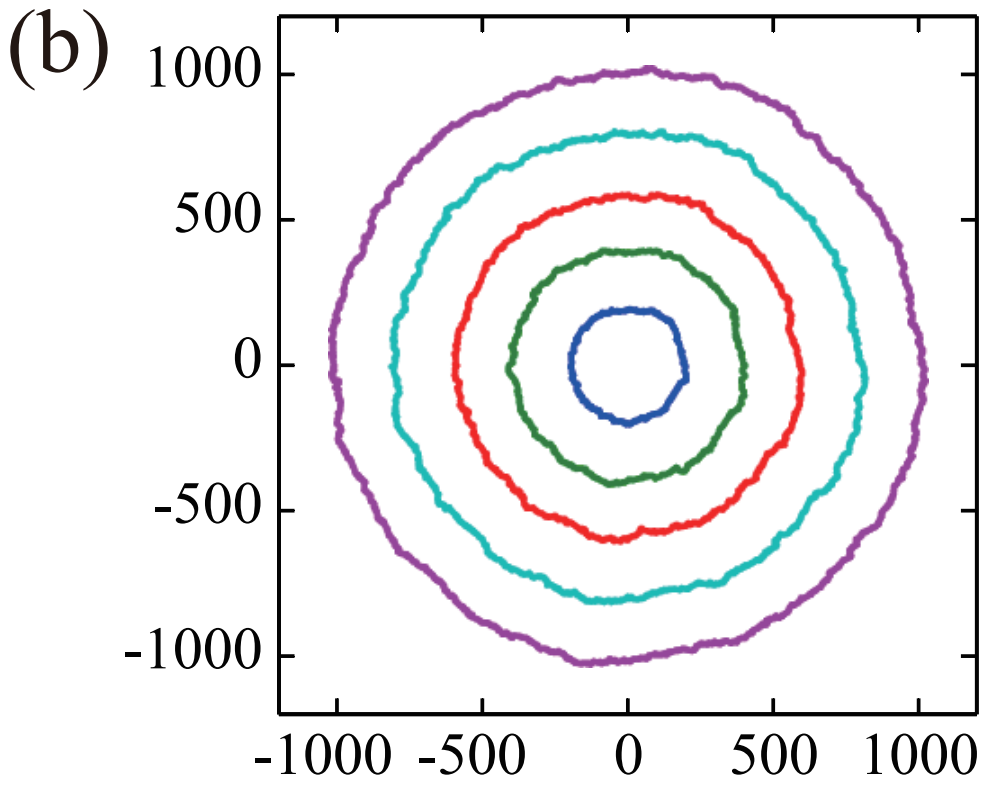




Off-lattice Eden model

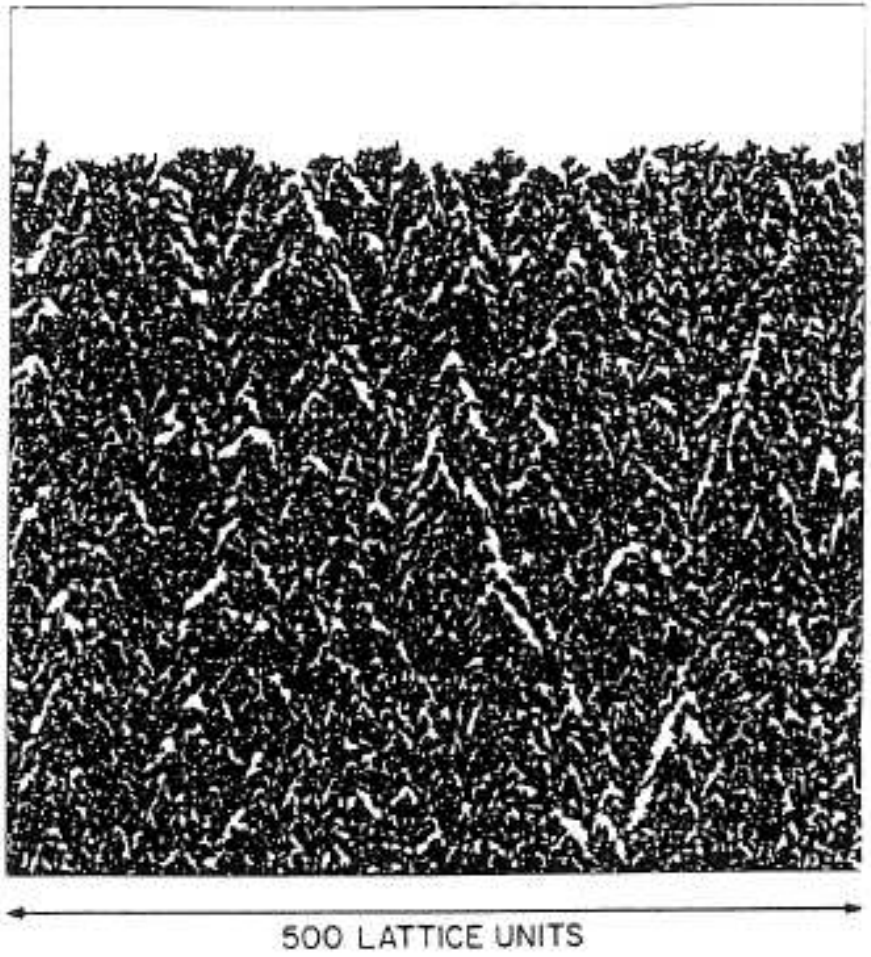
K.A. Takeuchi, JSTAT (2012) P05007





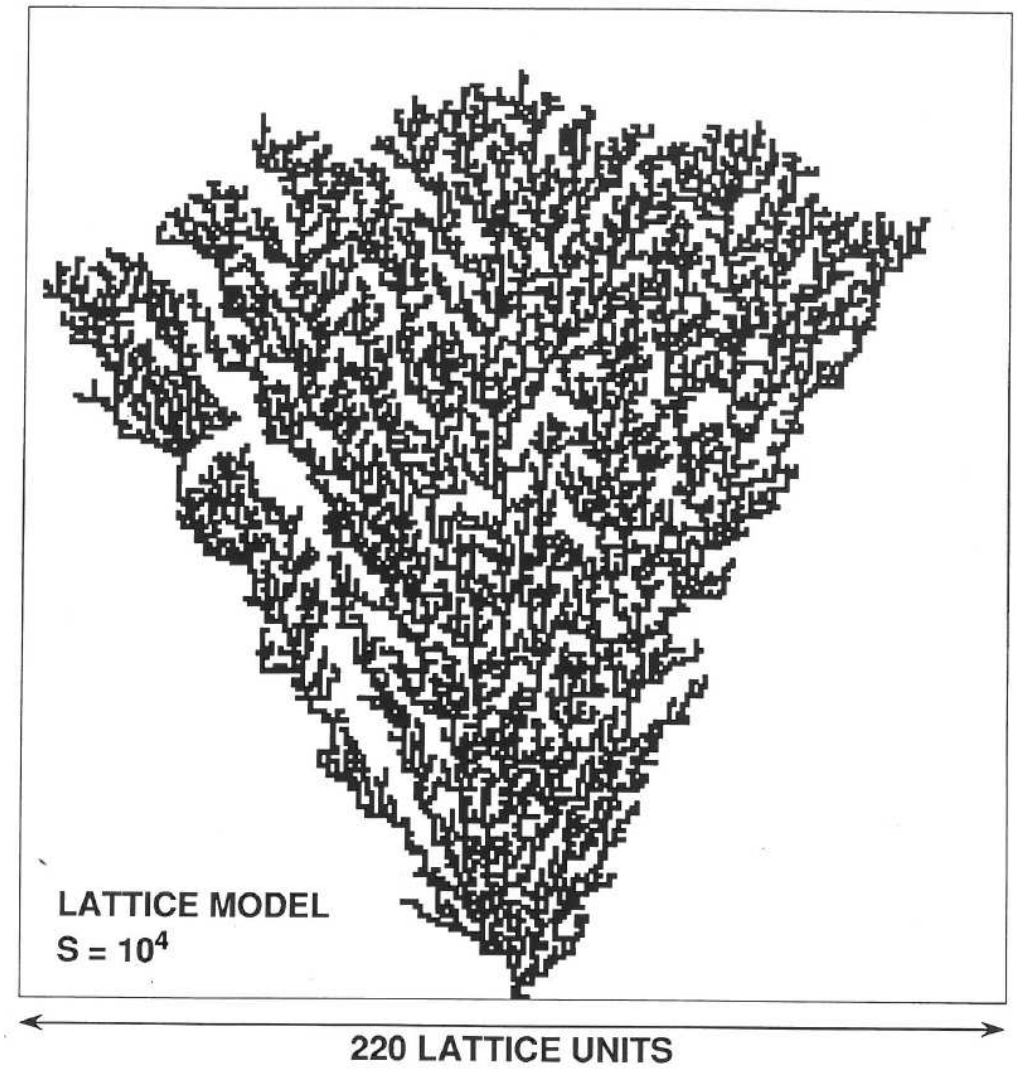
Ballistic deposition on a line

P. Meakin, 1988



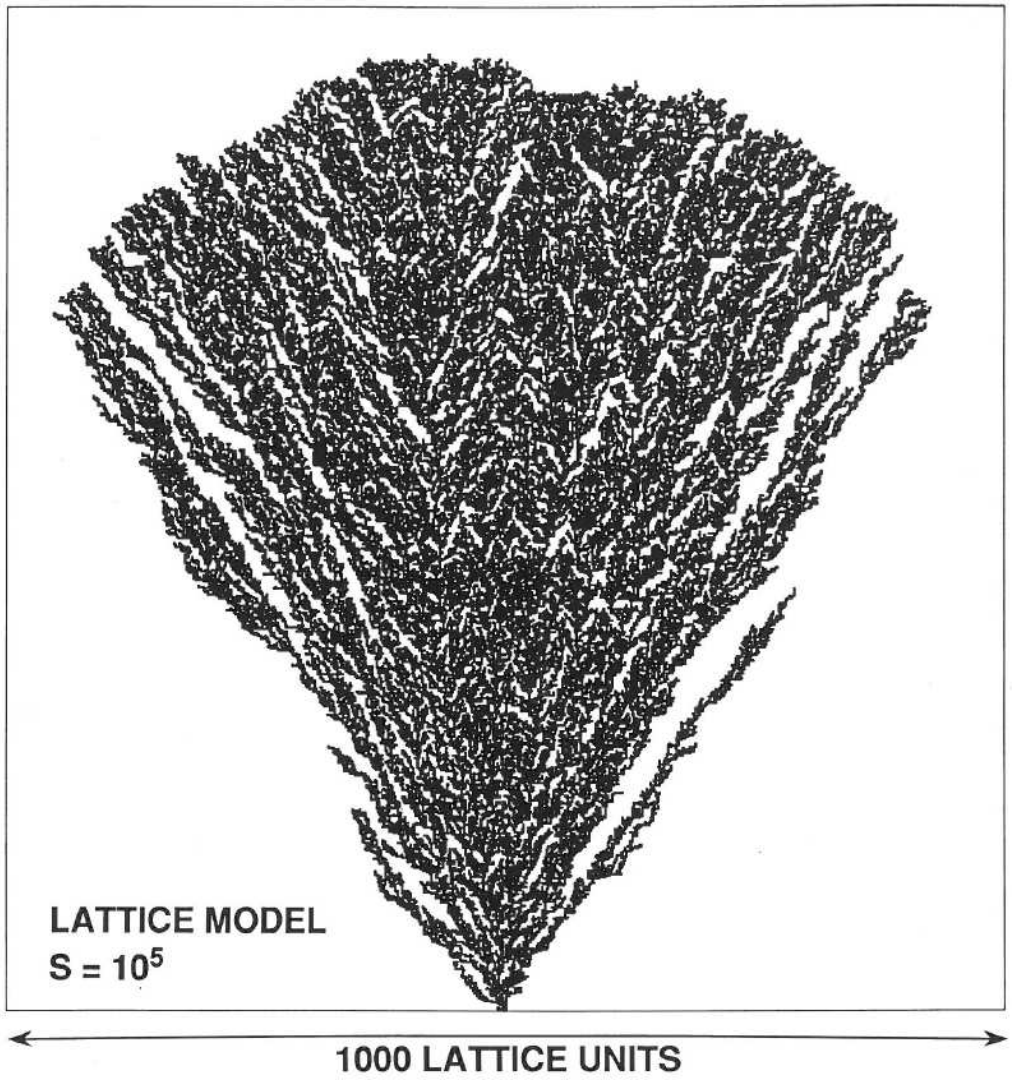
Cluster growth by ballistic deposition

P. Meakin, 1988



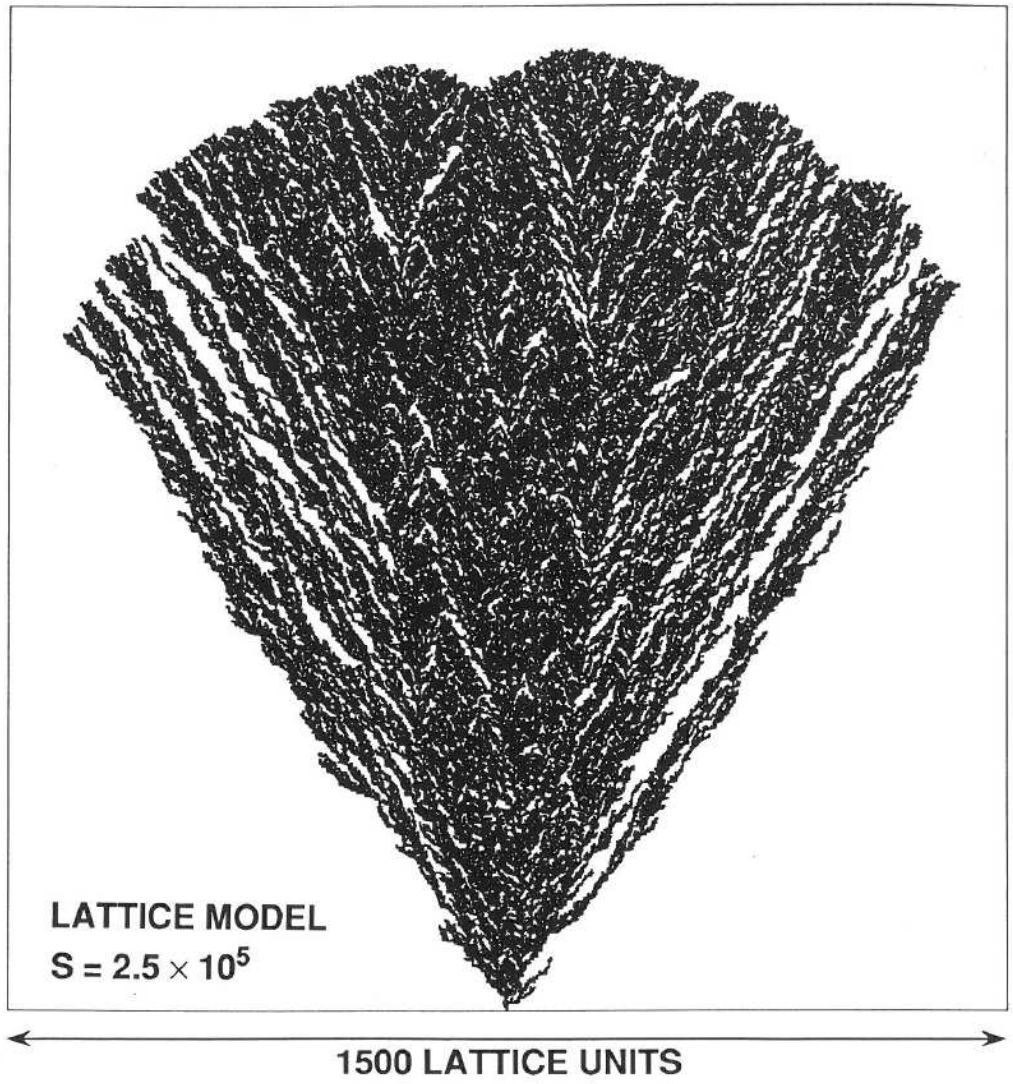
Cluster growth by ballistic deposition

P. Meakin, 1988



Cluster growth by ballistic deposition

P. Meakin, 1988

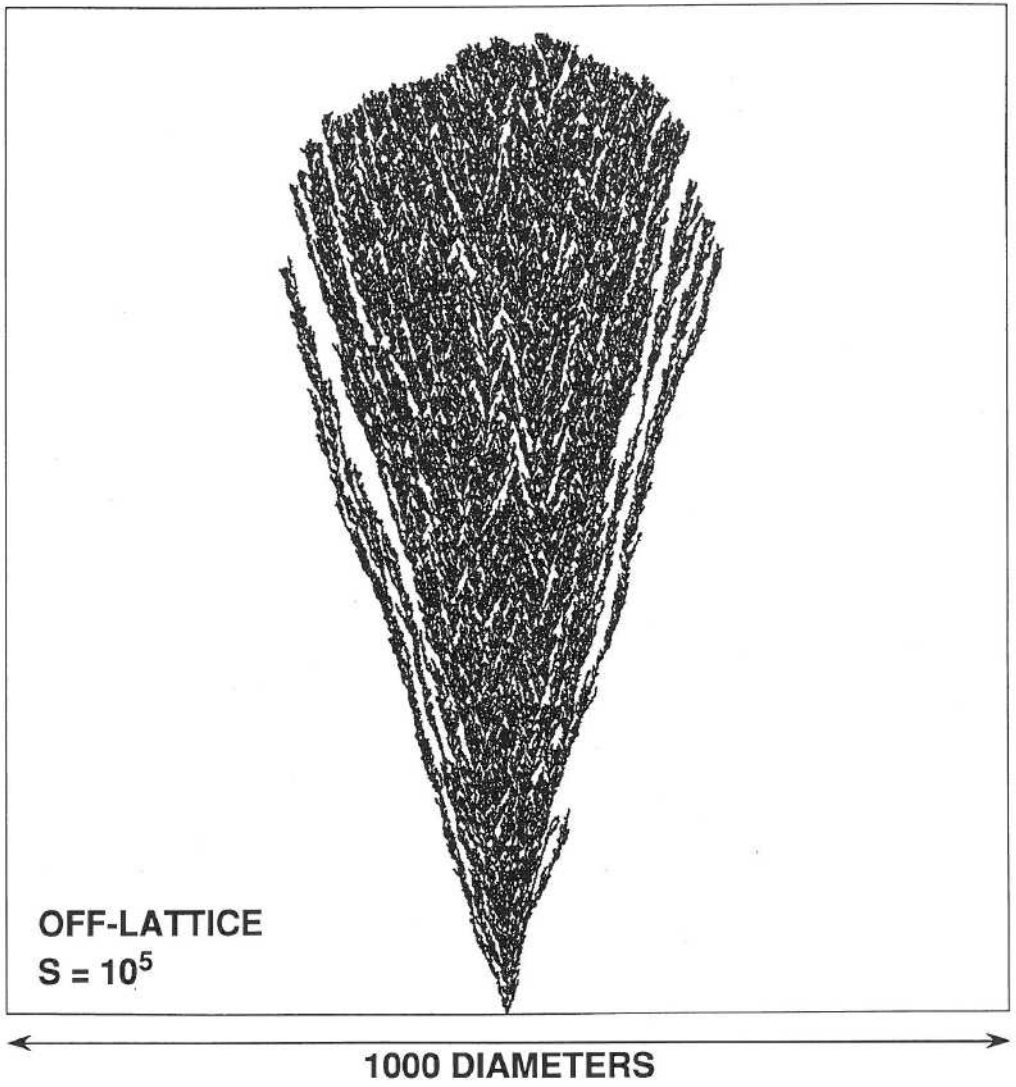


Cluster growth by off-lattice ballistic deposition

P. Meakin, 1988

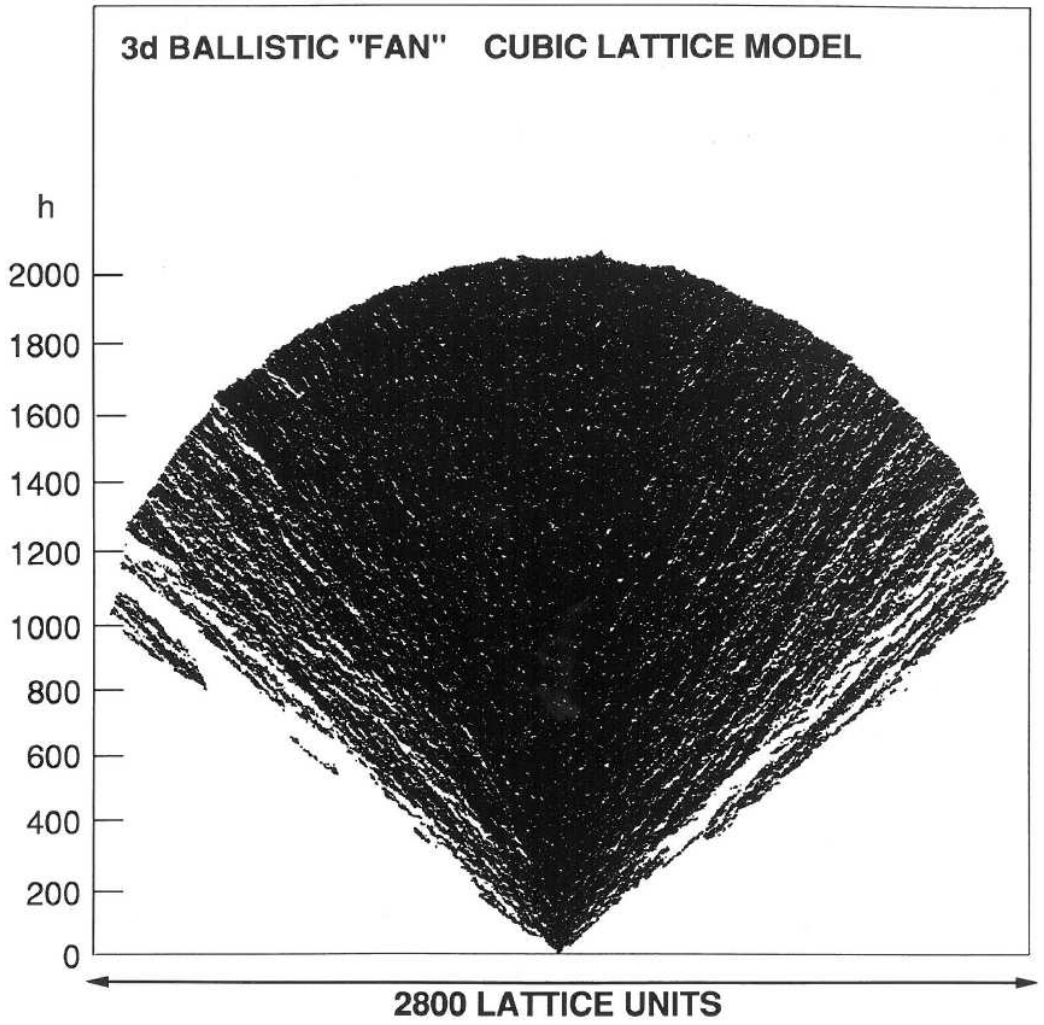
Cluster growth by off-lattice ballistic deposition

P. Meakin, 1988



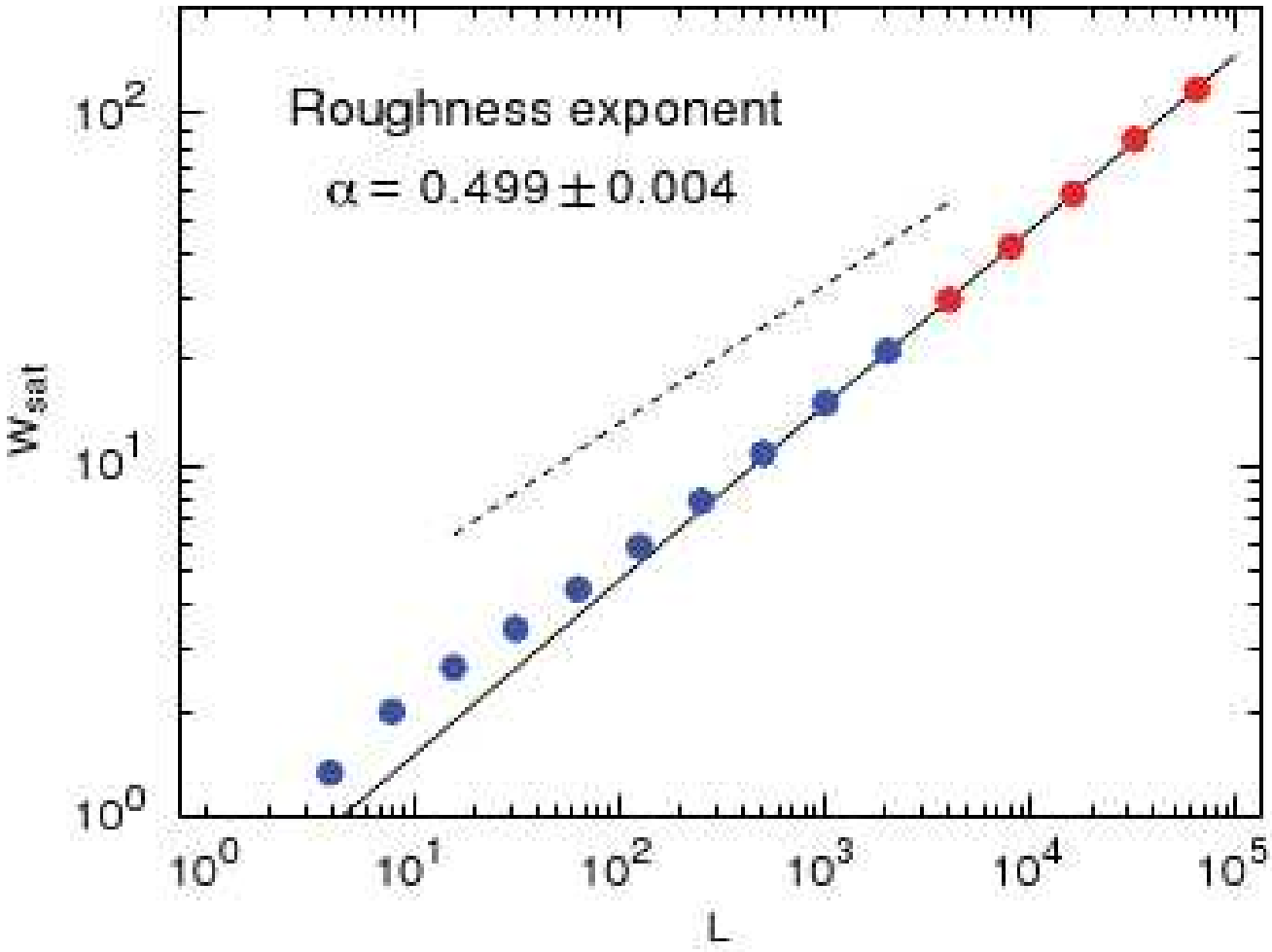
Cluster growth by three-dimensional ballistic deposition

P. Meakin, 1988



KPZ asymptotics for one-dimensional ballistic deposition

B. Farnudi, D.D. Vvedensky, Phys. Rev. E **83** (2011) 020103



KPZ asymptotics for one-dimensional ballistic deposition

B. Farnudi, D.D. Vvedensky, Phys. Rev. E **83** (2011) 020103