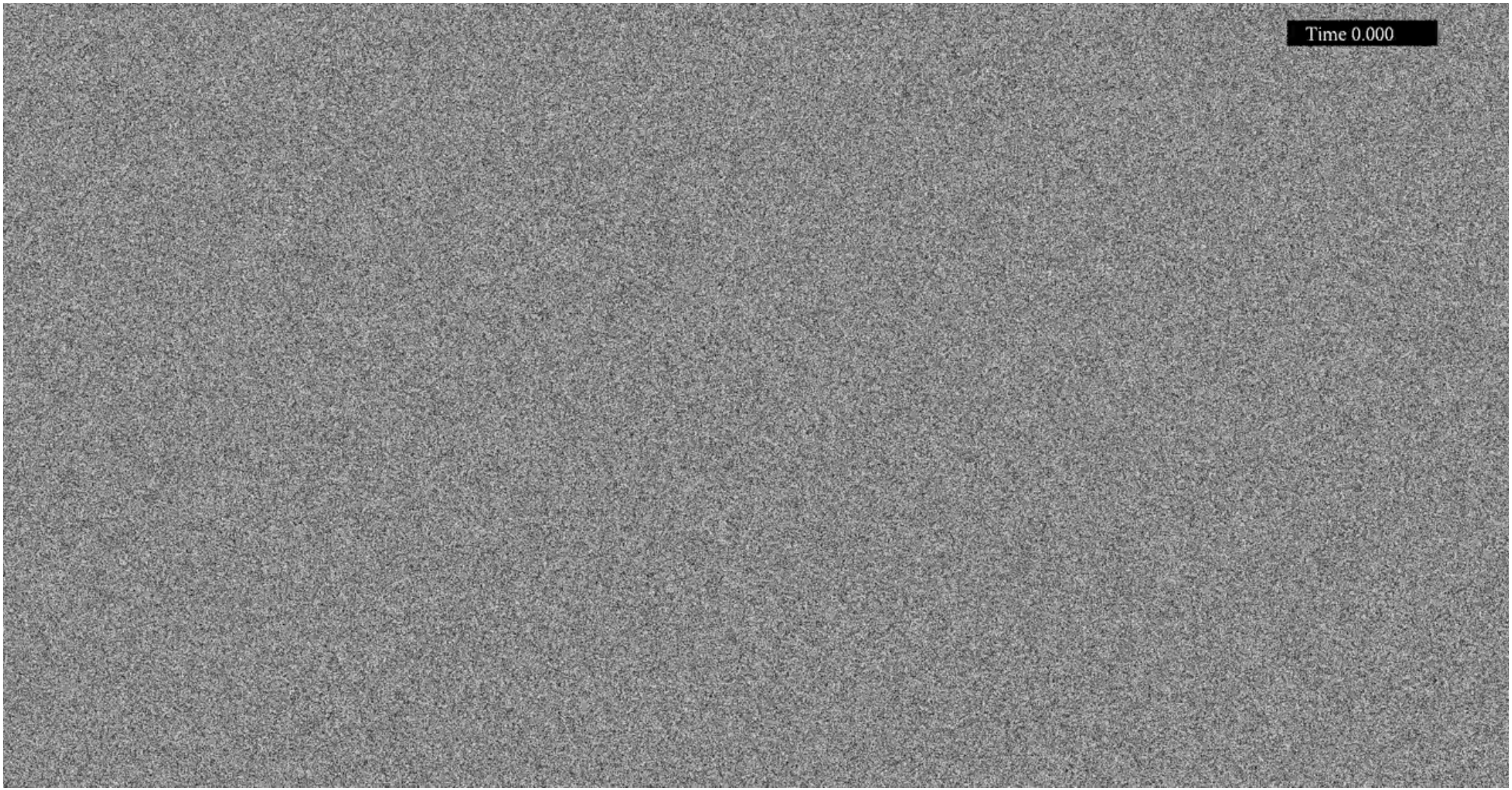
Numerical simulation of Cahn-Hilliard equation



https://www.youtube.com/watch?v=odZgi3uYa7s

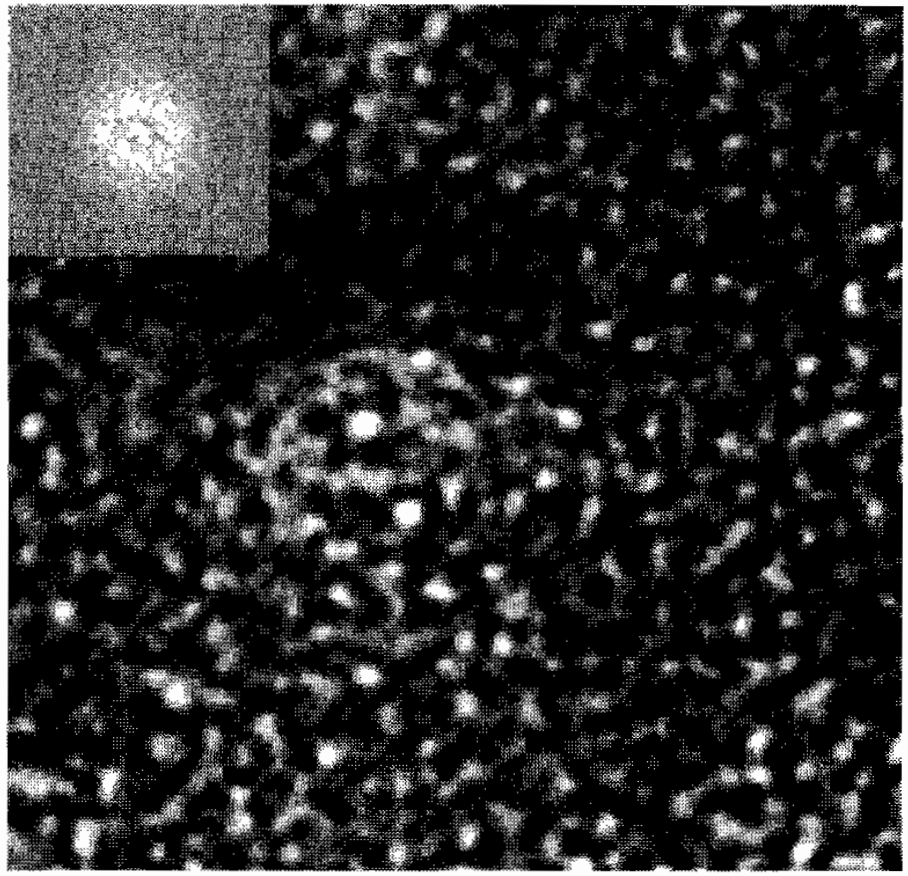


Fig. 3.9 Pattern formed by spinodal decomposition of a mixture of two polymers in a common solvent. Confocal micrograph of a mixture of polystyrene, polybutadiene, and toluene after quenching for 82 seconds. Picture courtesy of B. Jung.

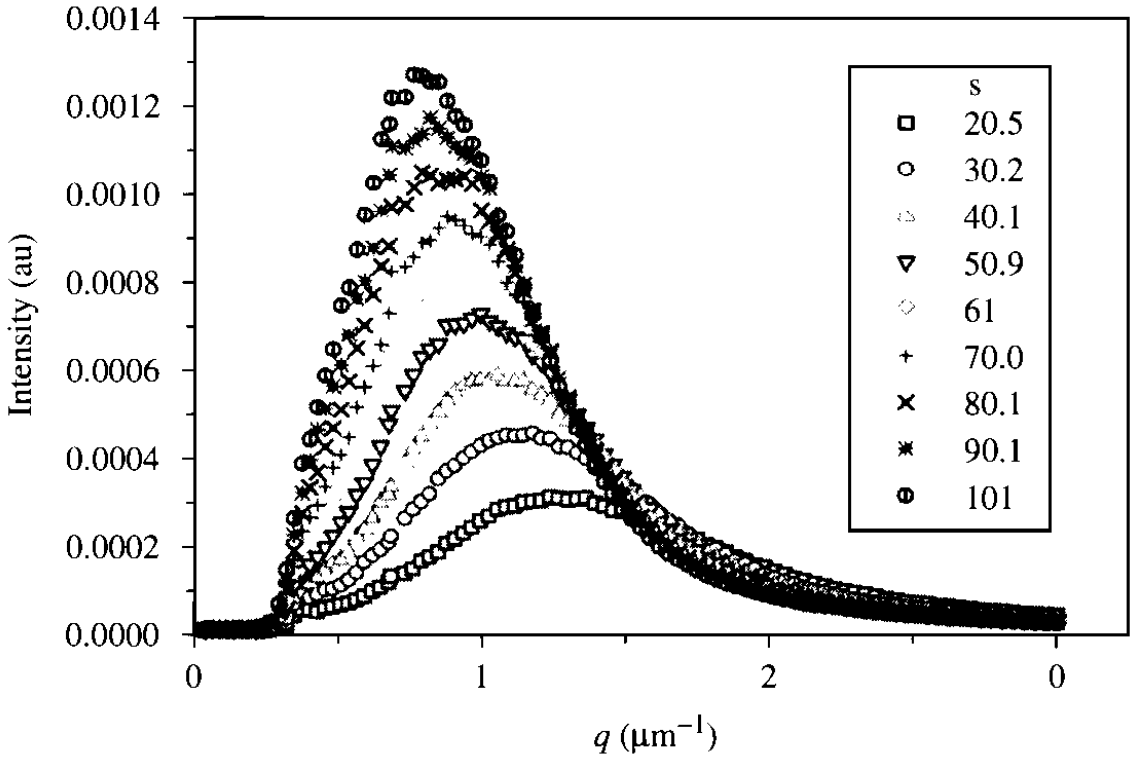
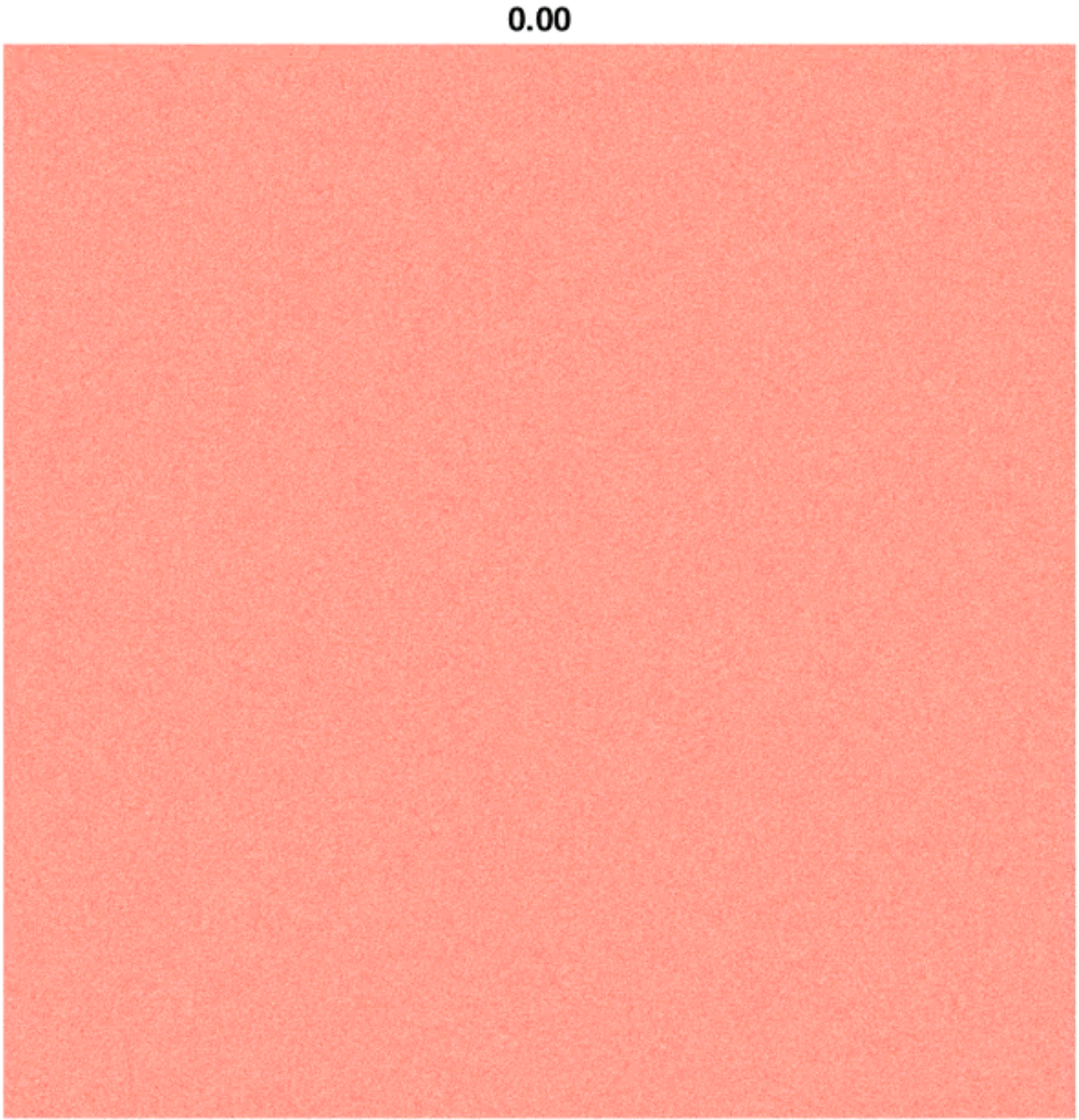


Fig. 3.10 Light-scattering curves from a polymer mixture quenched into the unstable region of the phase diagram, showing the maximum in intensity at q_{max} characteristic of spinodal decomposition. q_{max} moves to smaller values at longer annealing times, owing to non-linear coarsening effects. Graph courtesy of B. Jung.



numerical simulation describing the process of nucleation and coarsening of gas bubbles (red) out of a liquid (pink) that is initially supersaturated. https://www.youtube.com/watch?v=REcr2l7miVg