

MASSACHUSETTS INSTITUTE OF TECHNOLOGY

Kinetic Processes in Materials

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Problem Set 6: Due Wed. April 25, Before 5 P.M. in 13-5049

Exercise 6.1

Please complete problem 14.1 from KPIM.

Exercise 6.2

Please complete problem 14.2 from KPIM.

Exercise 6.3

Please complete problem 14.4 from KPIM.

Exercise 6.4

From the superimposed electron micrographs of Park and Allen (Lecture 22, p. 129), calculate an estimate (with an upper and lower bound) for the antiphase boundary (APB) mobility assuming an isotropic interfacial tension of 1 mJ/m^2 . In addition, estimate the time at which the cylindrical APB near the center of the image will disappear. Assume that $t = 0$ for the first of the two images shown. The second image was taken 62 seconds later.