

HW #6
(Due Nov. 6)

Questions 1 -5

Problems 5, 6, 7, 9 and 10 in Chapter 5 (May & Sze)

(Room temperature condition (298 K) is used for Problem 5, 6, and 7 in May's.)

Question 6

Describe the differences between high-pressure plasma etch and reactive ion-etch. When is it preferable to use one or the other.

Question 7

A multiple-step etch process is required for etching a polysilicon gate with an underlying thin gate oxide. The gases in a plasma reactor can be changed during each step. How do you design an etch process to obtain good dimensional control of polysilicon gate. (Hint: you need to consider both selectivity and anisotropy)