Enee416   Matthew Duty

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Problems

1. What are the advantages and disadvantages in the wet etching process using Silicon?
2. If a wafer goes through an ideal isotropic wet etching process with an etching rate of 1.6 µm/min for 22 seconds, what will the vertical depth of the etch be in the silicon wafer? What will be the width of the etch?
3. Design a mask for a 15um-long, 5um-deep v-groove trench using EDP (anisotropic). How wide should the mask window be? If EDP has a Si <100> -plane-etch-rate of 1um/min, how long should the etchant be applied?
4. Give an example of two different kinds of etch stops and describe how they work.