

First name	Problematic questions
Aaron	1,8
Alec	1,7
Amanda	1,7
Amin	1,7
Amy	
Andrew	
Anne	1,2,3,5,6
Anshul	3,7
Anton	1
Bilal	1
Bora	5
Brittni	1,3
Bryan	4
Carlos	3
Chris R.	
Christina	1,4
Christine	1,7
Christopher	1
Connor	1
David	1,6
Doga	1,2,9
Ellen	
Emily	1,7,9
Evan	2,3,6,7,9
Francie	1
Gerald	
Gogol	1
Jacob	

First name	Problematic questions
Janae	6,7
Jeffrey	1,3,7
Jeremy	1,5
Jin	
Jingyi	7
Josh B.	3,4,5
Josh R.	1,7
Laura	3
Laura	1,6,7,9
Lauren	
Lia	1
LJ	1
Matthew	3,6,7
Michael	1,7
Oliyvia	1,3
Part	3,5,6,7
Payam	1
Rachael	
Rahul	7
Richard	
Sachit	4,7,9
Samantha	
Samuel	1
Sarang	1
Sij	1,7
Tanay	1,7
Yangi	3,7
Zhentao	

## Common conceptual errors in Homework 4 (MSE250)

Updated 11 October, 2011

**Question 1** (slip system definition): you **MUST** include the terms “densest plane” and “close-packed (densest) crystal direction” when defining a slip system. Yes, it is a plane and direction where slip occurs, but that’s only half of it.

**Question 5** (the 3 strengthening mechanisms): I *cannot* believe that you all did not get 10/10 on this question. I mean, I even gave you the exact answers during discussion in that fill-in-the-blanks handout!!!

**Question 6** (recovery vs. recrystallization): Whenever you are describing a process, remember to look at:

- The physical mechanism
- Effect on structure
- Effect on properties

Most people did one or two of the 3 things above. You can apply this rubric to describe the strengthening processes too (or any other process)!

**Question 7** (how to achieve smaller grain size): Several people wrote incorrectly that cold work can reduce the grain size. *Cold work has absolutely no effect on grain size.* It is needed, however, before you can perform recrystallization, which *does* result in the nucleation of small grains. A lot of people mentioned something about a fast cooling rate (quenching), but you will not give you credit for this because we have not talked about this in class (RELY ON YOUR NOTES – IF YOU ARE MISSING SOME, ASK SOMEONE FOR THEM, EVEN ME!!)!!