Survey of Materials
Team project 1, due dates are set in Course schedule and Canvas LMS
Topic: Elemental solids

Take a column in the periodic table of elements and explain trends in bonding, structure, and properties for crystals of these elements as we move down the column (or across the group of elements if it is not a column). Here is an exemplary list of choices in the order of complexity:

- Group 14 (C and below)
- Group 15 (N and below)
- Group 13 (B and below)
- Group 16 (O and below)
- Group 17 (F and below)
- Group 1 (Li and below)
- Group 2 (Be and below)
- Group 18 (He and below)
- Transition metals: Ti to Ni
- Transition metals: period 3 to 6
- Cu/Zn to Au/Hg
- Lanthanides
- Actinides

Reminder: This is a scientific project whose more or less complete solution has a complexity scale of a peer-reviewed publication. That is why a precise exhaustive solution is not required. But try to do your best, spending a reasonable amount of time (about 2 hours per week per team member). It is expected that you will take TA's advisory on team-projects. Prepare 10 min oral presentation and be ready for additional 10 min of discussion. Very short written report is also required and should contain the information on participation of each team member. Assessed are science, technical level, presentation (both oral and slides), discussion, and written report.