Chemistry 160:477/577
SOLID STATE CHEMISTRY

Syllabus

Instructor
Prof. Jing Li (Rm. 3104, Chemistry and Chemical Biology Building, 445-3758, jingli@rutgers.edu)

Time and Place
Tuesday/Thursday, 10:55am-12:15pm

Office Hours
Friday 10:30am-12:00pm or by Appointment

Course Website
https://sakai.rutgers.edu/portal

Sakai Helpdesk
848-445-8721 (Available 24/7), sakai@rutgers.edu

Text and Reference Books:

Textbook:

Reference Books:

Learning Goals:
To understand the basic concepts and principles of solid state chemistry by exploring synthesis, structure, chemical bonding, physical properties and applications of various solid materials, and to achieve a fundamental understanding of the structure-property correlation in these materials, with an
emphasis on crystalline solids. The department learning goals are met by this course.

**Academic Integrity Policy:** http://academicintegrity.rutgers.edu/

**Lecture Notes:** Lecture notes will be posted on the course website (Sakai). Access will be provided to all students enrolled in the course.

**Problem Sets:** Questions will be selected from the textbook and from other sources. Problem sets will not be graded but the key to each question will be provided.

**Term Paper:** Students are required to write and present a term paper on a current topic in areas of Solid State Chemistry.

**Project:** Each student will perform band structure calculations of an assigned crystalline compound using selected software packages and submit results by due date.

**Exams:** There will be a midterm and a final exam. Final exam date and time can be found at: http://finalexams.rutgers.edu/ or scheduling.rutgers.edu/scheduling/exam-scheduling/final-exam-schedule

**Grading Policy:** Midterm Exam 30%; Final Exam 40%, Term Paper 25% (Report: 12%, Oral Presentation and Participation: 13%), Project 5%. All work must be completed by the due date to avoid reduction of credits.

**Self-Reporting Absence:** Students are expected to attend all classes; if you must miss a class, please use Rutgers absence reporting website: https://sims.rutgers.edu/ssra/ to indicate the date and reason for your absence. An email will be automatically sent to me.

**Resources:**
http://www.wiley.com/go/west/solidstatechemistrystudent/
http://www.crysmaker.com/
http://symmetry.otterbein.edu/
http://csi.chemie.tu-darmstadt.de/ak/immel/tutorials/symmetry/
http://www.3dchem.com/inorganic.html
http://homepage.univie.ac.at/nikos.pinotsis/spacegroup.html
http://www.crystallographiccourseware.com/
http://rcsr.anu.edu.au/
https://crystalsymmetry.wordpress.com/230-2/
https://crystalsymmetry.wordpress.com/nets/mof-nets/