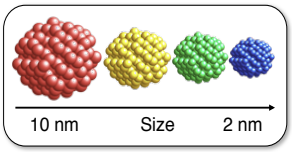
Computational Nanoscience for Energy

Fall 2009 : 3.29 : TR 9:30-11 : Prof. Jeffrey Grossman : jcg@mit.edu
12 Units (3-0-9) : Graduate Course : Seniors with Permission

Materials for energy conversion and storage can be greatly improved by taking advantage of unique effects that occur at the nanoscale. This course will provide the fundamentals of computational problem-solving techniques that are used to elucidate the atomic-scale behavior of energy conversion and storage nano-materials.

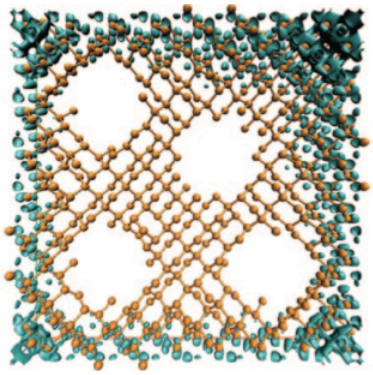
Want to help to solve THE ENERGY CRISIS?

Did you know that it can be done with... nanoscience  and a computer? 

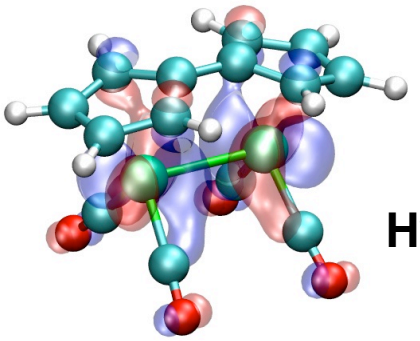
In this class you will learn how to use simulations to:

- Understand Fundamental Mechanisms
- Predict a Wide Range of Nanomaterials Properties
- Design Improved Energy Conversion & Storage Materials

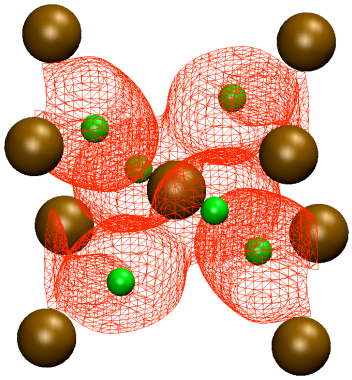
Detailed materials examples will be given for:



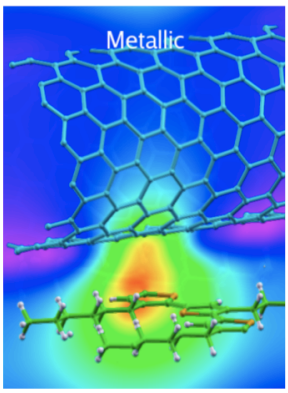
Thermoelectrics



Solar Fuels



Hydrogen Storage



Solar Cells