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3.22 Mechanical Properties of Materials  
Spring 2008

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# Special Topic Name



special topic graphic

Team Member Names  
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Cambridge, MA 02139 USA

# Big Picture

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- Macroscopic description of the phenomenon  
(including which classes of materials exhibit this mechanical behavior)
- Engineering/scientific application of this mechanical behavior  
(including why you and the rest of us care about how this works)

Use helpful graphics and/or graphs.  
List concise form of key continuum-level equations.  
Do not overanimate, but use if helpful.  
List full citation of any work that is not your own<sup>1</sup>.

# Microscopic mechanism

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- Microscopic of the phenomenon  
(including how material is designed or processed to optimize mechanical behavior)

Use helpful graphics re: atomic, crystal, or molecular structure.  
Do not overanimate, but use if helpful.  
List full citation of any work that is not your own<sup>1</sup>.

# Prediction & Optimization

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- Prediction  
(use preceding equations and knowledge to make a prediction; you've done this in the pset wikis)
- Optimization  
(based on what you know now, predict structural/processing/environment changes to optimize your mechanical behavior of interest. This could also be sharing of already optimized structures, and explaining why that is the optimum.)

Use helpful graphics.  
Do not overanimate, but use if helpful.  
List full citation of any work that is not your own<sup>1</sup>.