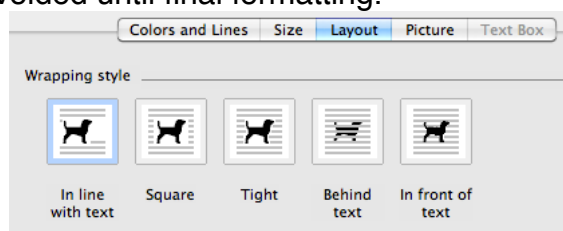


This assignment begins by using Adobe Reader (free) to copy a figure from a scientific paper and include it in a Word document that you will hand in. (A 400% view contains approximately the same number of pixels as the printed page if you would like to check for “jaggies”.) The process for posters in PowerPoint is similar. Note that most web images do not have sufficient resolution to use in papers and posters, although sometimes Google images are large enough.

1. Select a recent paper from an American Chemical Society Journal. Either click on the link to a journal at <http://chemistry.beloit.edu/classes/> or search a topic from the link just above the list of journals.
2. Select one figure that you understand from the paper. Copy the figure using the higher resolution directions on the other side of this page. Paste the figure into Word. Select Format/Picture/Layout and choose “in line with text.” This option is most useful for drafts since the figure stays the same place in the text order. The other options should be avoided until final formatting.



You can also Format/Picture/Size to rescale. For bitmap objects or web figures the maximum usable scale is 75%; a scale of 25% is preferred for best print quality. If that scale makes the figure too small, then the figure will have to be redrawn before use!

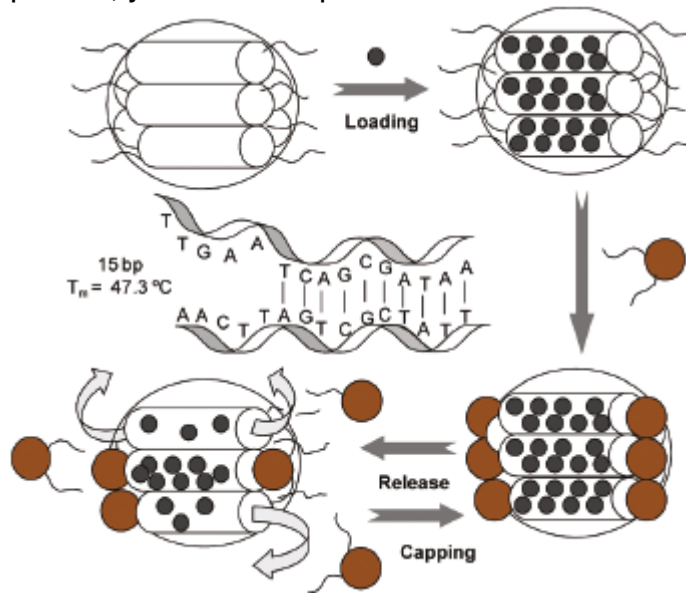
3. Provide a reference to the original paper using the American Chemical Society citation format. See the links on the chemistry department home page under Resources. An ACS example from the University of the Sciences library is:

Author's last name comma first initial period (multiple authors separated by semi-colon) space Title of article (with no quotations) period space *abbreviation for journal title italicized* (period only if journal title ends with abbreviation) space left bracket Online right bracket space **year bolded comma** space *volume number italicized* comma space first page hyphen last page period URL space left parenthesis accessed date right parenthesis period.

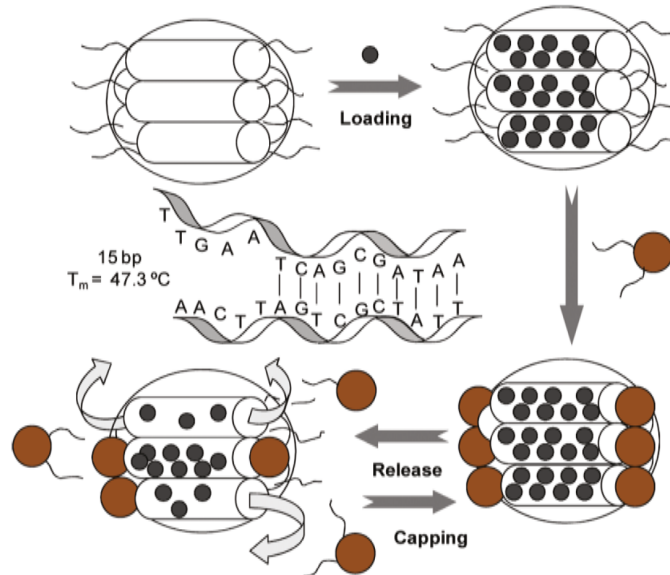
EXAMPLE: Patel, N. A.; Swope, C. Femtochemistry in Nanoseconds. *J. Phys. Chem. A* [Online] **2001**, *92*, 1038-1050. <http://pubs.acs.org/2001/jpca/jpca921038.pdf> (accessed Oct 23, 2006).

High resolution images from Adobe Reader

- Open your PDF in Adobe Reader (free) or Acrobat Pro.
- Use menu Edit/Take a Snapshot. Drag the crosshairs to draw a box around area you want to copy. The snapshot tool automatically copies the selected area to the clipboard; you can then paste it into Word or PowerPoint.



- For higher resolution, zoom in to 400% for the image while it's still selected, then right click it and choose "Copy Selected Graphic". You can then paste the higher resolution version into Word or PowerPoint.



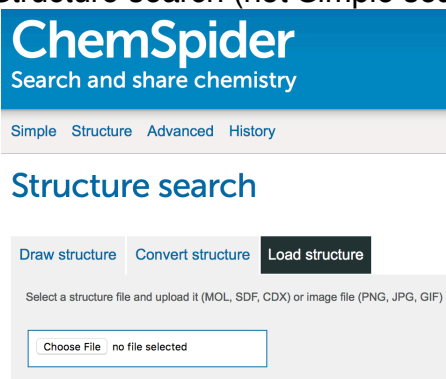
Can you see the difference in these two images?

4. In addition to the high resolution figure with ACS citation, also add all of the following items to your word document. Print and hand in your page.

The chemistry home page has links to *chemical databases* in the resource section.
<http://chemistry.beloit.edu/classes/onlinechem/>

Use the links found on the Beloit chemistry page to do the following. (No Google.)

- Use the *DrugBank* to download a MOL file for Benazepril and prostaglandin E2, open each file in ChemDraw (enable all documents), select all, change the font to 16 point, then copy and paste the structure into your Word document.
- In ChemDraw draw a real molecule that you could name. Save As/MDL Molfile.
- Copy and paste the ChemDraw structure into your Word document.
- ChemSpider* is a resource that searches millions of compounds by structure. In ChemSpider select Structure search (not Simple search).



Click on “Choose file” and select the mol file created in step b. The molecule should appear in the edit window. At the bottom right of the page click on **SEARCH**.

What does ChemSpider say is the name of your molecule? Add the name from ChemSpider to your Word document.

- In ChemSpider select 3D from under the molecule. (JSmol should work on any browser.) Have patience the first time you do this as the software loads. If you want a larger figure, go to a bigger jsmol window such as the one at <http://chemistry.beloit.edu/fuels.html>, right click on the image and select File/Load/Open local file.
- If hydrogens are missing, right click and select Computation/Model Kit. Right click .../add hydrogens. Right click .../exit model kit mode. If size or shape seems off, right click Computation/Optimize structure.
- Drag on the molecule to rotate to a nice view. Right click on the image and select style/scheme/CPK Spacefill. Right click on the image and select color/background/white. Right click on the image and select file/Export/Export PNG image. Add the 3D molecule to your Word document.