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Identified Best Learning Objects

• Excellent for review, visualizations and theory
  • University of Alberta IR Spectroscopy Tutorial
  • University of Alberta NMR Spectroscopy Tutorial
We Need More Practice!

Identification of Organic Compounds Using IR and $^1$H-NMR Spectroscopy

The following infrared and proton NMR spectra provide a good introduction to the use of these techniques for identifying organic compounds and their structures. The top spectra are IR and the bottom spectra are $^1$H-NMR. Based on the spectra and the given molecular formula, write the structure of each compound.

Compound 1, C$_{10}$H$_{14}$O
We Need More Practice!

• Practice is GREAT.

• These can be improved.

• No information is given regarding to HOW to solve these problems.

• No explanations accompany answers.

Jing Wrappers!

Help to guide problem solving!
What About Student-Run Discussions?

- Students teaching other students how to understand spectroscopy is great on every level.

- Can we use new online learning objects to facilitate discussions about spectroscopy?

  Voice Thread.

- Upload difficult problems and have students make their own interpretations of what the spectra may indicate.
  - Extra GSI points for insights and good chemical intuition shown in the thread?
Implementation

• Using Sitemaker to make a comprehensive website full of our new wrapped learning objects.

• Install LOs in Renata and Gracie’s lab sections.

• Assign certain LOs and collect work.
  • Work will not be graded.

• Continue developing technique-based LOs for the winter term.
Other Ideas

- Include a repository of optional LOs on our Sitemaker site for additional practice
  
  - Carry over topics from 211 for refreshers
  
  - Include advanced references for topics covered
  
  - Endless amounts of practice problems
Thank You!
Questions? Suggestions?