

You Tube Resources for NMR and IR spectroscopy and mass spectrometry (MS)

Chemistry 2312
Honors Organic Chemistry Laboratory

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Excellent set of YouTube videos on Knowbee

(I don't condone the lecturer's granting of gender to atoms, nuclei, molecules, and spectra. They also routinely and incorrectly refer to a single nucleus as a "nuclei". Ok, we'll look past these imperfections to benefit from the rest of the well-done content.)

Fundamentals of NMR spectroscopy:

Series of ten videos. Total of ca. 2 h of viewing. (see screen shots below for contents/topics)

<https://www.youtube.com/watch?v=TJhVotrZt9I&list=PL6CD5AlpaPUEkncpJh4SH-nluapxxlq0j>

Fundamentals of IR spectroscopy: (15 min)

https://www.youtube.com/watch?v=0S_bt3JI150

Fundamentals of Mass spectrometry:

The instrument, how it works, and the molecular ion (20 min)

<https://www.youtube.com/watch?v=2oPUyIbPxLo>

Fragmentation (Parts 1 and 2; 24 and 12 min):

<https://www.youtube.com/watch?v=FCCFiyoDTaM>

<https://www.youtube.com/watch?v=mbXOP28W9z8>

Nuclear Magnetic Resonance Spectroscopy Part 1
Knowbee - 1 / 10

Video Number	Video Title	Duration
1	Introduction to NMR Spectroscopy Part 1	23:05
2	Introduction to NMR Spectroscopy Part 2	10:19
3	Number of Signals in NMR 1st Aspect of NMR	20:25
4	Shifting of Signals in NMR 2nd Aspect of NMR Part 1	13:41
5	Shifting of Signals in NMR 2nd Aspect of NMR Part 2 Anisotropy	9:50
6	Shifting of Signals in NMR 2nd Aspect of NMR Part 3	3:28
7	Integration of Signals in NMR 3rd Aspect of NMR	3:44
8	Splitting of Signals in NMR 4th Aspect of NMR Part 1	28:34
9	Splitting of Signals in NMR 4th Aspect of NMR Part 2	3:07
10	Splitting of Signals in NMR 4th Aspect of NMR Part 3	15:16