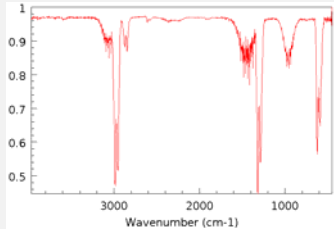


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[TP] In the IR spectrum shown of CH_3Br , the absorption near 3000 cm^{-1} is due to ...

25% 1. C–Br stretch
25% 2. C–H stretch
25% 3. H–C–Br symmetric stretch
25% 4. H–C–Br antisymmetric stretch



Response Counter 10 1

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Lecture 9 CH101 A2 (MWF 11:15 am)
Monday, September 25, 2017

For today ...

- Infrared (IR) spectra

Next lecture: Ch4: (secs 1, 3, and 4 only): Atmospheric warming
Think about It e4.4: Collisional heating <http://goo.gl/vQ0Nz>
Think about It e4.5: IR windows <http://goo.gl/I8IGz>
Begin ch5: Chemical reaction, chemical equations

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Infrared (IR) spectra

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Resonance in light-matter interaction

Demonstration: Tale of three frequencies

Frequencies **match** → ...
response (**energy transfer**)

Frequencies **do not match** → ...
“transparency” (**no energy transfer**)

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What is being displayed in an IR spectrum?

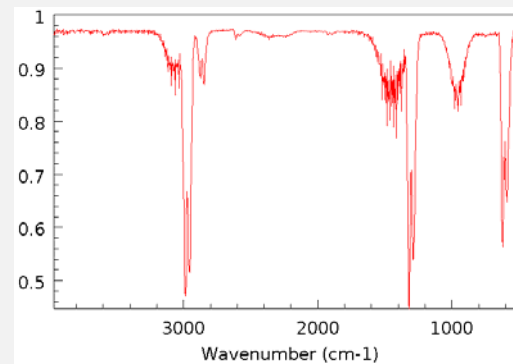
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What is being displayed in an IR spectrum?

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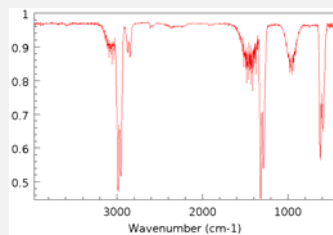
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[TP] In the IR spectrum shown of CH_3Br , the absorption near 3000 cm^{-1} is due to ...

- 0% 1. C-Br stretch
 0% 2. C-H stretch
 0% 3. H-C-Br symmetric stretch
 0% 4. H-C-Br antisymmetric stretch

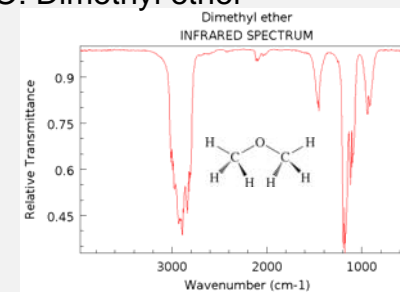
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$\text{C}_2\text{H}_6\text{O}$: Dimethyl ether

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