General Chemistry for Engineering: Interactive LibreTexts

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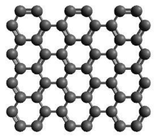
General Chemistry for Engineers -

Four credits with laboratory

- Atoms-first approach
- Combines genchem I and II
- Strong materials science and other engineering applications
- Math ready students!
  (pre-req: Calc I & Intro to Engr)

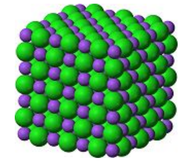


Why LibreTexts?

- Free and students able to print
- Easy construction from course shell content & to add/revise content
- Allows for Latex-based mathematical formulae
- Easy Incorporation of interactive features

$$K_1 K_2 = \frac{\cancel{[NO]^2}}{[N_2][O_2]} \times \frac{[NO_2]^2}{\cancel{[NO]^2}\,[O_2]} = \frac{[NO_2]^2}{[N_2][O_2]^2} = K_3$$

Interactive Features - makes the text come alive!

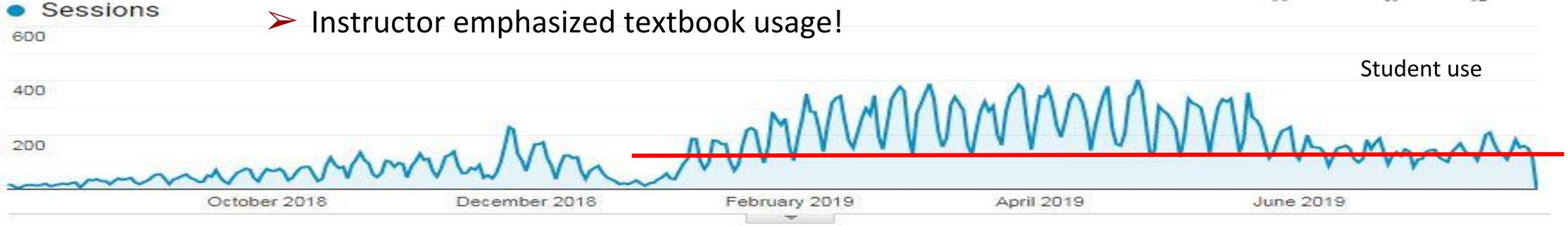


- YouTube videos
- PhET simulations
- CalcPlot 3D
- 3Dmol - molecular rendering
- Hypothes.is - online annotation including collaborative groups

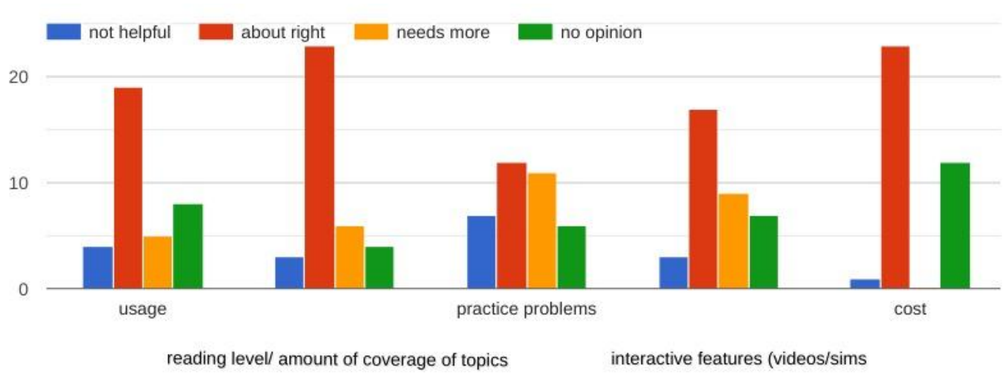
$$^{254}_{98}Cf \rightarrow {}^{118}_{46}Pd + {}^{132}_{52}Te + 4{}^{1}_{0}n$$

Student Usage - Google Analytics (50K hits)

- Instructor emphasized textbook usage!



How did students find the LibreTexts textbook? (n = 36 students)



Conclusions

Students liked it and used it! ...and we need more practice problems (considering video problem solving).

More info, just Google - **genchem4engineers**

Presented at Maryland Open Source Textbook (M.O.S.T.) Regional OER Forum: Central Maryland in September 2019.