

Powerpoint presentation checklist

Slide format

- Start with blank slides; don't use a PowerPoint template.
- Background should be a solid color and have high contrast with text (e.g., plain white background with black or blue text).
- Each slide should have a left-justified sentence headline (6 – 12 words) at the top that states the main assertion of the slide. Only capitalize the first word.
- Have margins.
- Only put logos on the first slide.

Slide contents

- Put sponsors on title slide, rather than at end.
- No outline slide.
- Background/justification should be appropriate for audience; i.e., you do not need to explain the first law to chemical engineers.
- Try to include an image on every slide.
- Are acknowledgments needed at end?
- Summary or conclusions does not need to be a bullet point list.
- Do not use decoration like clip art.

Text on slides

- Don't use complete sentences (except for the headline)-use short phrases.
- Make slides that reinforce your words, not repeat them.
- Slides should have as little text as possible. Minimize bullet lists. When possible, replace text with a figure. People remember visuals better.
- Some suggestions (not rigid rules):
 - A table should not have more than 12-15 entries
 - Lists should have no more than 3 items.
 - Don't have more than five lines of text.

Text fonts and color

- Fonts should be at least 20 point, but not larger than 28 or 32, including figure axes and labels and tables. Largest font for slide headline, smallest for axes.
- A test of readability is to print 6 slides per page to see if you can read all the text.
- Make all fonts the same type (Arial or another sans serif font is easier to read).
- Capitalize only the first word in a sentence or phrase (easier to read); do not use all caps.
- Avoid red-green and yellow-blue combinations; can be difficult for color-blind people.

Graphs

- Don't use legends for graphs or bar charts:** put labels near the data (e.g., on or to the right of each curve in x-y plot).

- Make figures big enough so readable from the back of the room; usually when multiple graphs are on a slide, the graphs are too small.
- Minimize clutter.
- Use labels on axes sparingly (e.g., 0.2, 0.4, 0.6, 0.8 may be sufficient)
- Do not use two y-axes (use 2 graphs instead)
- Don't use figures from a paper directly in a presentation.
- Don't use more significant figures than justified (including axes labels).
- To explain something complex, build (animate) the parts of your chart or diagram in steps. For example, introduce graphs with multiple plots in multiple slides.
- Include error bars if possible.
- Make text horizontal whenever possible.
- Don't use 3-D graphs.
- Don't use gridlines or a border.
- Make bar graphs horizontal and put text directly on bars.

Preparing your talk

- Devote more than half your presentation time to your 2 or 4 points.
- Make simple slides: one idea per slide.
- Don't present too much data.
- Rehearse every talk.

When presenting

- Information is more difficult to process if presented in both spoken and written form at the same time. Reading text on a slide makes it harder for the audience to follow.
- Make eye contact with the audience.
- For each graph, tell what the axes are and explain what each curve is.
- If something is on a slide, you should talk about it; otherwise remove it.
- If using computer pointer, make it large enough to see and don't use red.

References

- Gar Roberts, Presentation Zen: Simple Ideas on Presentation Design and Delivery, New Riders (2011).
- Michal Alley, The Craft of Scientific Presentations: Critical Steps to Succeed and Critical Errors to Avoid, 2nd Ed., Springer (2013)
- Powerpoint defaults are weak: <https://www.assertion-evidence.com/guide.html>
- Susan McConnell, Designing effective scientific presentations: <https://www.youtube.com/watch?v=Hp7Id3Yb9XQ>
- Jean-Luc Doumont, Creating effective slides: Design, Construction, and Use in Science <https://www.youtube.com/watch?v=meBXuTIPJQk>
- Martins Zaumanis, Scientific Presentation Skills: How to Design Effective Research Posters and Deliver Powerful Academic Presentation, Peer recognized series (2022).
- Data Visualization checklist: <https://stephanieevergreen.com/data-visualization-checklist/>

left justified example of a title slide Title: 28 -32 font

Transient measurements of adsorption isotherms in ZSM-5 and ZSM-11 zeolite membranes

only first word capitalized
Tracy Q. Gardner, Justin Lee, John L. Falconer, Richard D. Noble
Department of Chemical and Biological Engineering
University of Colorado Boulder

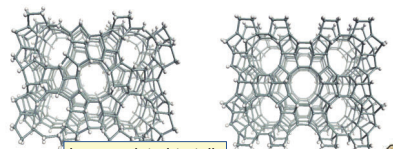


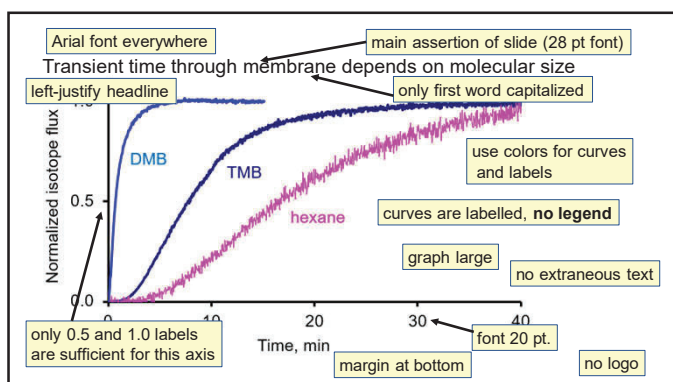
image related to talk

funding on first page
Funding: National Science Foundation
logo on first page only
University of Colorado Boulder

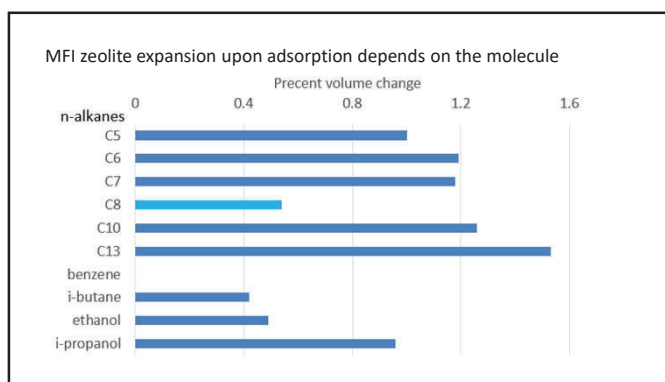
1

Fonts should be at least 20 point, but no larger than 32 pt
Use Arial font (or other sans serif font), don't change fonts
Don't use serif fonts like Times New Roman
Only capitalize first word in sentence or phase
Don't Capitalize Each Word
DON'T USE ALL CAPS
Left justify text
Do not center text
High contrast (black text on white or light yellow background)
Don't use red or black on blue

2



3



4

left-justify headline example of a table

Template removal in inert doubles permeance in SAPO-34 membranes

main assertion of slide (28 pt font); not a heading

Template removal	CO ₂ permeance 10 ⁻⁷ mol/(m ² s Pa)	CO ₂ /CH ₄ selectivity
air	4.1 +/- 1.2	60 +/- 11
N ₂	7.5 +/- 2	50 +/- 7
vacuum	8.1 +/- 2	55 +/- 6

limit table entries to ~12
every value in table should be discussed in talk

4.6-MPa feed pressure, 15 membranes

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Each slide should have a sentence headline that states the main assertion of the slide. Don't use headings like introduction, background, etc.
no more than 2 lines of text

It is more difficult to process information if it is presented both in both spoken and written form at the same time. Reading the information on a slide makes it harder for the audience to follow.
no more than 2 lines of text together

Make simple slides: one idea per slide
Try to include an image on every slide
As little text as possible on slide
Don't use Powerpoint templates

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