

# Presenting Science

Oral presentations – Part II

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**Eindhoven**  
University of Technology

**Where innovation starts**

# In Ten Steps to an Excellent Presentation

A large, light gray number '10' is centered in the background. A circular arrow, also in light gray, surrounds the number '10', indicating a ten-step process.

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# In Ten Steps to an Excellent Presentation



**Start in time**

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weeks - months ...

# In Ten Steps to an Excellent Presentation

2

**Capture the  
message in one  
sentence**

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# In Ten Steps to an Excellent Presentation

3

**Select**

**and determine order**

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# In Ten Steps to an Excellent Presentation

4

**strong opening**

**Not: I am Jim Speaker from .... and my title of TODAY is ....**

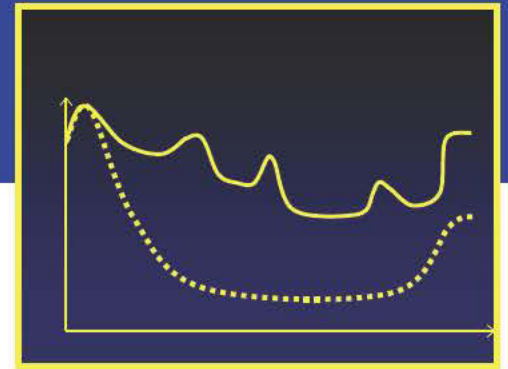
**+**

**informative introduction**

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***at least 30% of presentation***

# Introduction



- **Attention Getter**

- Rhetorical Question
- Startling Statement, Case Story, Statistics
- Humor (Careful!!!)

- **State Significance**

- **Establish Credibility**

- **Main Message**

- **Preview of the contents (*meaningful*)**

*Write it out word for word (right language!)*

# In Ten Steps to an Excellent Presentation

**5**

**Conclusion**

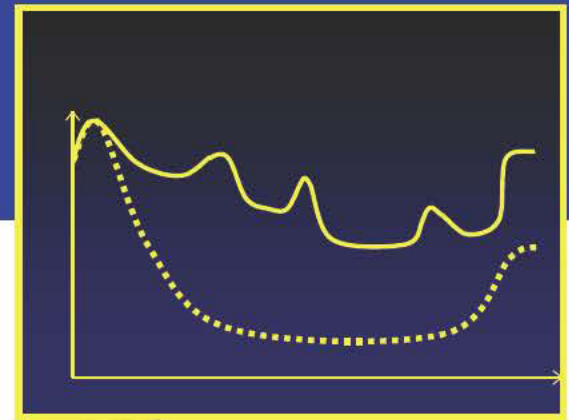
**+**

**strong final sentence**

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# Conclusions



- **Review:**
  - why
  - how
  - main results & conclusions
- **Message**
- **Acknowledgements**
- **Final Sentence: Repeat the Message**

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*Write it out word for word (right language!)*

# In Ten Steps to an Excellent Presentation



6

## Figures and Schemes

*avoid puzzles*

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# Model catalyst preparation

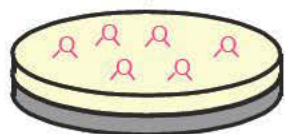
Schuit Institute of Catalysis



Si (100)



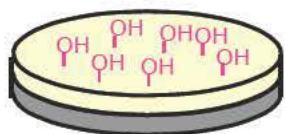
Calcination 750°C



amorphous  $\text{SiO}_2$  with surface siloxanes



1.  $\text{H}_2\text{O}_2$  /  $\text{NH}_4\text{OH}$  (65°C)
2. boiling  $\text{H}_2\text{O}$  (rehydroxylation!!)



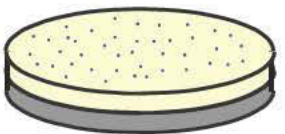
hydrophilic  $\text{SiO}_2$  surface with silanol-groups (4-5  $\text{OH}/\text{nm}^2$ )



Spincoat-impregnation with aqueous solutions  
*chromic acid in water*



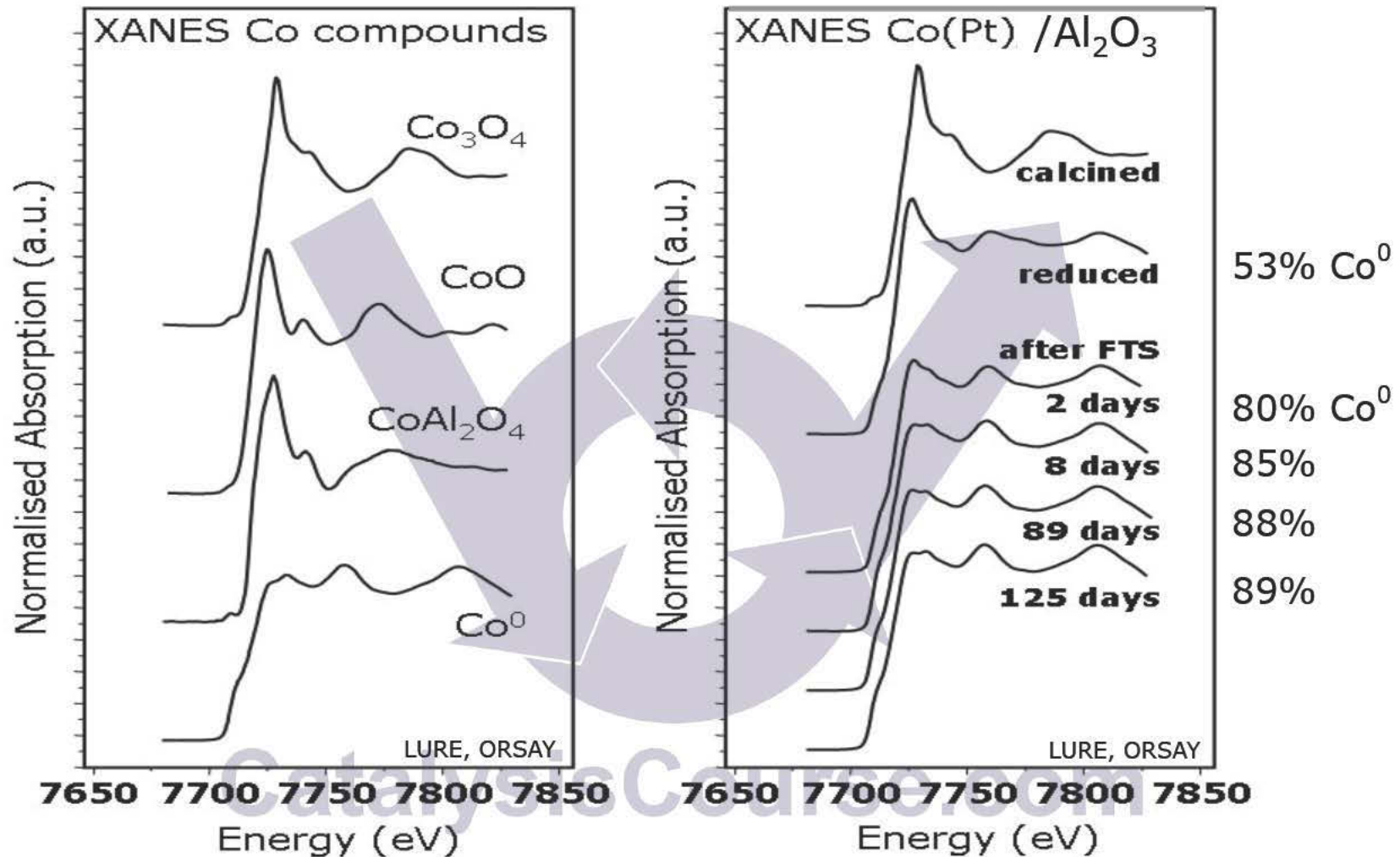
2800 r.p.m.  
in dry  $\text{N}_2$



Supported "oxides"

Courtesy Peter Thüne

# XANES Spectra of Cobalt Fischer-Tropsch Catalysts



**No oxidation of Co, instead reduction of unreduced cobalt**

# Use High-Quality Illustrations

- **Careful with graphics programs**  
*(Excel, Powerpoint, OpenOffice, etc.)*
- **Meaningful labels on curves,**  
**and not in legends**
- **Include 'as-measured' data**
- **Informative headers,**  
**key words, conclusions**

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7

**Clear slides**

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# Presenting Science

- Presentations at Meetings*
  - ➔ *Oral Contributions*
    - ✓ Invited Talks
    - ✓ Normal Contributions
  - ➔ *Posters*
- Publications*
  - X *Full Articles*
  - X *Letters*
  - X *Reviews*
  - X *Letters to the Editor*

# Don't Overdo It !!

## Presenting Science

### Presentations at Meetings

- Oral Contributions
  - Invited Talks
  - Normal Contributions
- Posters

### Publications

- Full Articles
- Letters
- Reviews
- Letters to the Editor



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Yellow on white is hard to read



Red on Blue appears blurry to

This is not a success either

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**This is not recommended**

**text on a structured background**

**may look fancy and attractive at first sight**

**but is hard to read in a large lecture theater**

**even if you use large, black lettering**

# This is acceptable

**bright yellow or white  
on the darkest possible blue**

*but be careful with other colors*

*red, grey, green, orange, brown, blue*

*are much less clear*

This is quite clear!

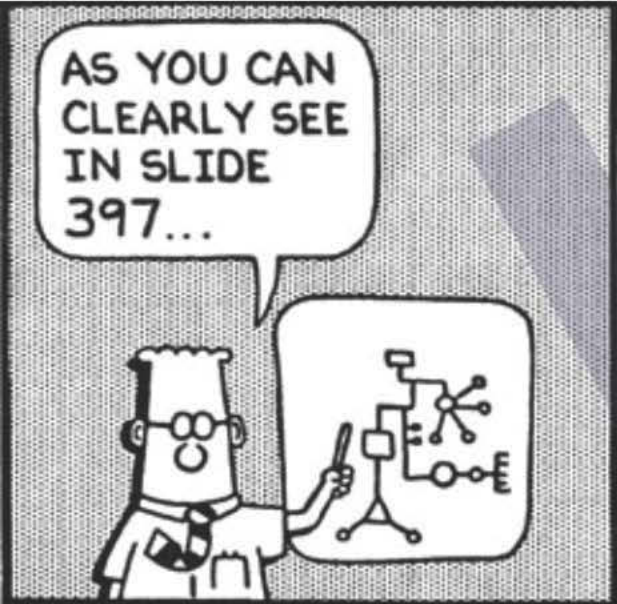
nothing wrong

with black letters

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on a white background

# Not too many slides please



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[www.dilbert.com](http://www.dilbert.com)

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*~ 1-2 per minute*

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8

**Use everyday  
language**

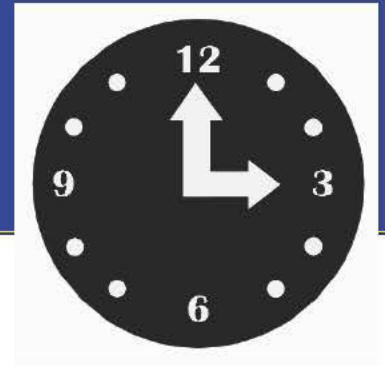
**communication**  
**in stead of**  
**performance**

# In Ten Steps to an Excellent Presentation



**Too much material: skip some items in the middle**  
**NEVER** compromise on Introduction and Conclusions

# Timing



**Avoid loosing time in the beginning:**

- don't repeat what the chairman said
- write out your start in short powerful sentences and rehearse them several times

# In Ten Steps to an Excellent Presentation

10

Stage fear .....

don't take it wrong

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# Feel free

to develop your own style

*(avoid article structure!)*

**.....but always build your talk  
around a clear message  
for a specific audience**

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# success!



*...it is not difficult to belong to  
the top 25% of presenters  
at international meetings...*

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TU/e  
www.catalysiscourse.com  
Characterization of solid catalysts  
Introduction  
Prof. Dr. J.W. Gerritsen  
TU/e

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How does a catalytic reaction proceed?  
 $A + B \rightarrow P$   
separation  
reaction  
Answer: via a cycle of elementary reaction steps in which molecules react in a complex formed with sites on the catalyst, which are regenerated at the end of the cycle.

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How often are techniques used  
percentage

Technique	Percentage
SEM	18.2
Adsorption	17.4
FTIR	16.8
UV-vis	15.2
IR	14.6
EDS	13.8
UV-vis	13.2
EDS	12.6
EDS	12.0
EDS	11.4
EDS	10.8
EDS	10.2
EDS	9.6
EDS	9.0
EDS	8.4
EDS	7.8
EDS	7.2
EDS	6.6
EDS	6.0
EDS	5.4
EDS	4.8
EDS	4.2
EDS	3.6
EDS	3.0
EDS	2.4
EDS	1.8
EDS	1.2
EDS	0.6
EDS	0.0

References:  
Applied Catalysis A & B  
Catalysis Letters  
Journal of Catalysis  
Jan 2002 and Oct 2005  
Total Number of Articles:  
8112

TU/e  
length and time scales in catalytic processes  
microscopic  
mesoscopic  
macroscopic