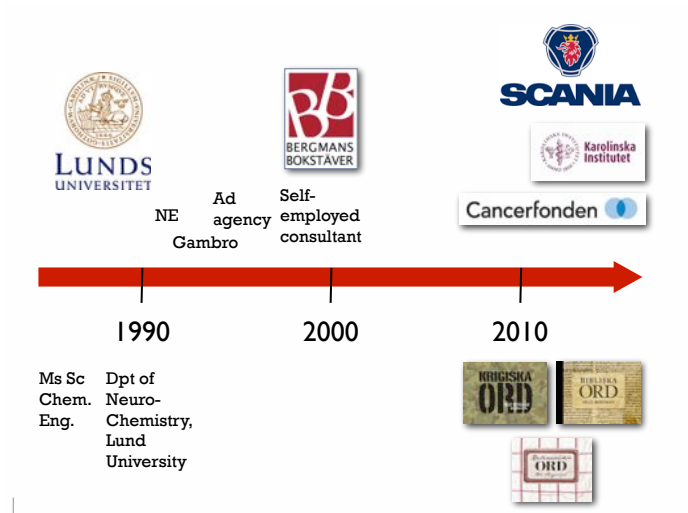





Olle Bergman

M.Sc. Chemical Engineering

“Communications Consultant, Public Speaker & Professional Writer with a passion for people, science, language & history.”



**SOMETHING IS
BROKEN
in scientific
communication
– so let's fix it!**

- 
1. Poor emotional engagement.
 2. Strong, yet dysfunctional conventions.
 3. Widespread do-it-yourself culture.

PROBLEM



**PP
SOLUTION**

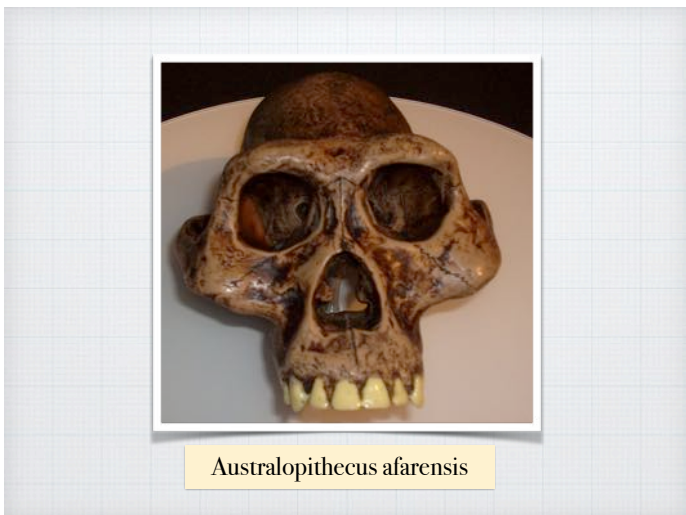
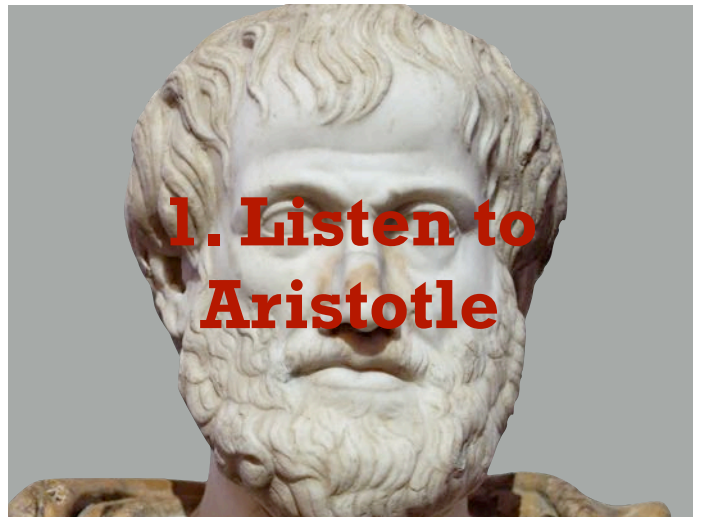


Passion

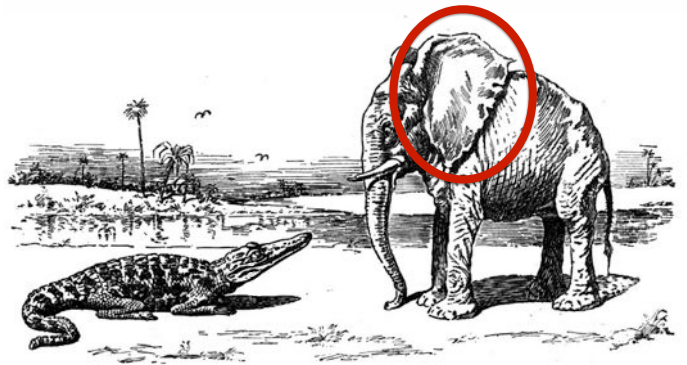


Professionalism

- ▶ Transfer information?
- ▶ Create understanding?
- ▶ Convince opponent?
- ▶ Sell an idea or a product?
- ▶ Influence decisions?
- ▶ **CHANGE THE WORLD!!**



**3. Listen to
the person
in front of you**



*"To thine own
self be true"*

Hamlet Act 1, scene 3

**Talking to
the media**



**Every profession
forms a **culture**
and develops
blind spots.**

Mindset of scientists



- Embrace uncertainty!
- Details are cool.
- Opposition is a tool.
- Truth is an aiming point.
- Certainty is a process.

The most common misunderstanding about science is that scientists seek and find truth. They don't — they make and test models ... Making sense of anything means making models that can predict outcomes and accommodate observations. Truth is a model.

Neil Gershenfeld, American physicist

Mindset of media people



- Communication changes things.
- Pick your messages.
- Summarize, simplify, package.
- New target group = new task.
- Society is a playfield of rhetoric.

nature
nanotechnology

SUPPLEMENTARY INFORMATION

DOI: 10.1038/NMANNANO.2014.21

Graphene photodetectors with ultra-broadband and high responsivity at room temperature

Chang-Hua Liu^{1†}, You-Chia Chang^{2†}, Ted Norris^{1,2*} and Zhaohui Zhong^{1*}

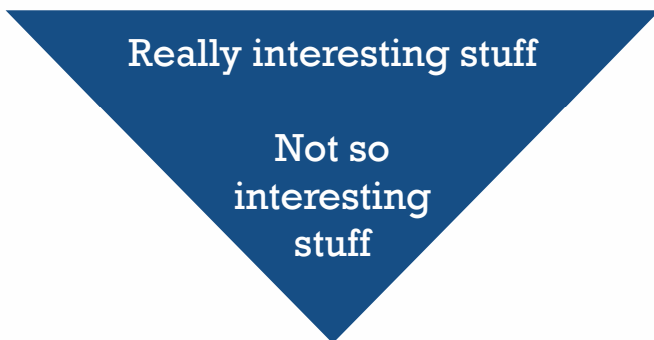
Supplementary Section 1.

Measurement of the capacitance of Ta₂O₅ dielectric layer

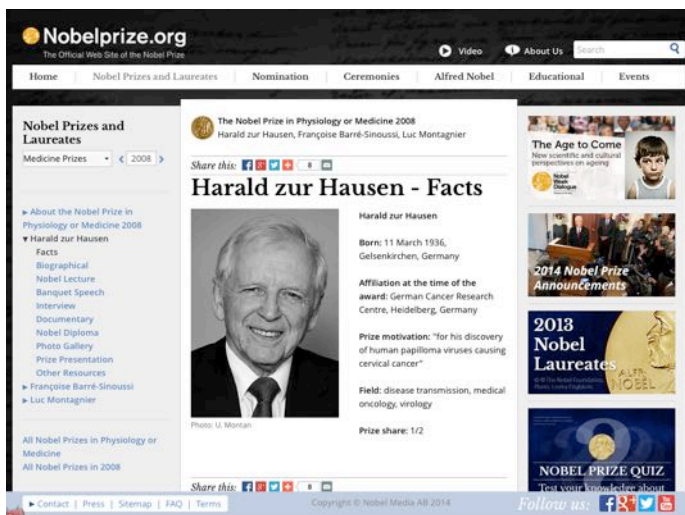
To measure the capacitance of Ta₂O₅ dielectric layer, we configure our double layer graphene heterostructure device as a dual gate field-effect transistor (Fig. S2a). Here, the Si substrate is used as the backgate and top graphene layer is served as the top-gate. Sweeping both top-gate voltage (V_{gt}) and the backgate voltage (V_{bg}) can modulate the channel conductance of bottom layer graphene. A 2D colour plot of bottom layer graphene resistance versus both V_{gt} and V_{bg} are shown in Fig. S2b. It is apparent that ambipolar transfer characteristics can be observed with both gate voltage sweeps, with the charge neutrality point (V_{gt}^{CNP} , V_{bg}^{CNP}) identified as the local peak in resistance. More importantly, the slope of $\frac{dR}{dV} \sim 74$ in the 2D plot gives a direct



The inverted pyramid



- ▶ Who?
- ▶ When?
- ▶ What?
- ▶ How?
- ▶ Where?
- ▶ Why?



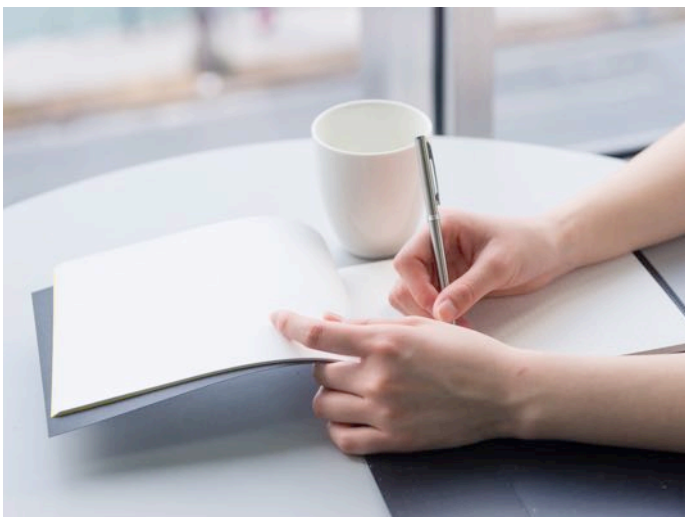
1. Be there.



2. Educate.



3. Take command.



4. Build the relation.

5. Cherish the opportunity.

1. Is it wise talking to the media?
2. Find the best reporter.
3. Tell a bigger story; include the patients and clinicians.

communicator



Creating relations with
businesses & financiers

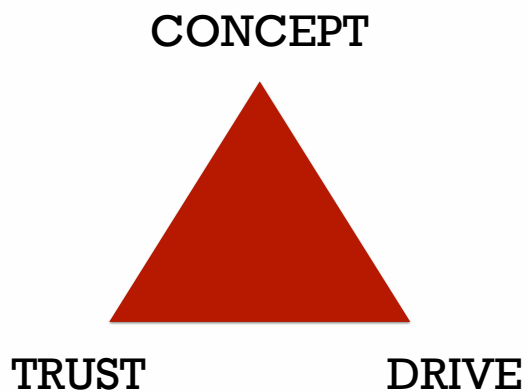
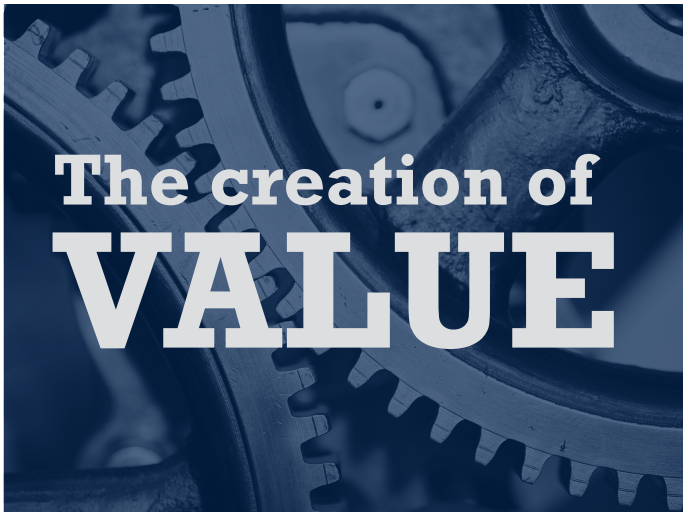
1. Get out of the lab.

2. Tell a story.

3. Skip the details.

4. Work with professionals.

5. Mingle.



- ▶ Do they understand their own concept?
- ▶ Do they believe in their own idea?
- ▶ Is there a hidden problem?
- ▶ Do they agree with each other?
- ▶ Do they have the motivation it takes?
- ▶ Do they have the skills it takes?

THE VISION

THE GOAL

THE METHOD

1. Keep it simple, leave out details
2. Use a picture
3. Try to use "threesomes"
= a list of 3 components, products, beneficiaries, etc.

1. Establish your ethos.
2. Use their language
3. Work with visuals & metaphors.





- What do you do as a scientist?
- What problem(s) do you solve?
- How is your research different?
- Why should I care?

3 THINGS

I learned from

EXPERIENCE

Start with the
limitations



Embrace
professional
diversity



Learn your stuff &
set the format
– then play it by ear.



**Take
home
messages**



ETHOS
PATHOS
LOGOS

1. Be there.
2. Educate
3. Take command.
4. Build a relation.
5. Cherish the opportunity.

1. Get out of the lab.
2. Tell a story.
3. Skip the details.
4. Work with professionals.
5. Mingle & network.



**Communicating
with
IMPACT**

CLARIFY
your concept

SIMPLYFY
your message

ENGAGE
your audience

**THE RIGHT
ATTITUDE:**

personal
modesty
+
professional
boldness

CRASTINA
– the new wave of science communicators



Be a part of CRASTINA:

<http://crastina.se>

I appreciate your emails:

olle@bergman.com

*PS Feel free to
connect on LinkedIn!*