

# DPI Annual Meeting 2019















**The Plastics Revolution**

How the Netherlands Became  
a Global Player in Plastics

by [illegible]







YOU CAN'T  
BUY  
BUSINESS  
BUY  
PIZZA

TAKE LIFE LIKE  
PIZZA  
ONE SLICE  
AT A TIME





36

# Polymer Composites



polym  
techno

TU/e

EINDHOVEN  
UNIVERSITY OF  
TECHNOLOGY

Micromechanics  
Systems for

Complex Composite  
Prediction

Greenen<sup>2</sup> & T.A.P. Engels<sup>2</sup>



... the failure loc...

... residual stress, res...

... which suppress the formati...

... shown in Figure 3.

... is **not the absolute positive** value of ...

... hydrostatic stress which is dominant. In add...

... crazes seem to form at positions where all

... **principal stresses are positive**. This principle is

... shown in Figure 4.































































































































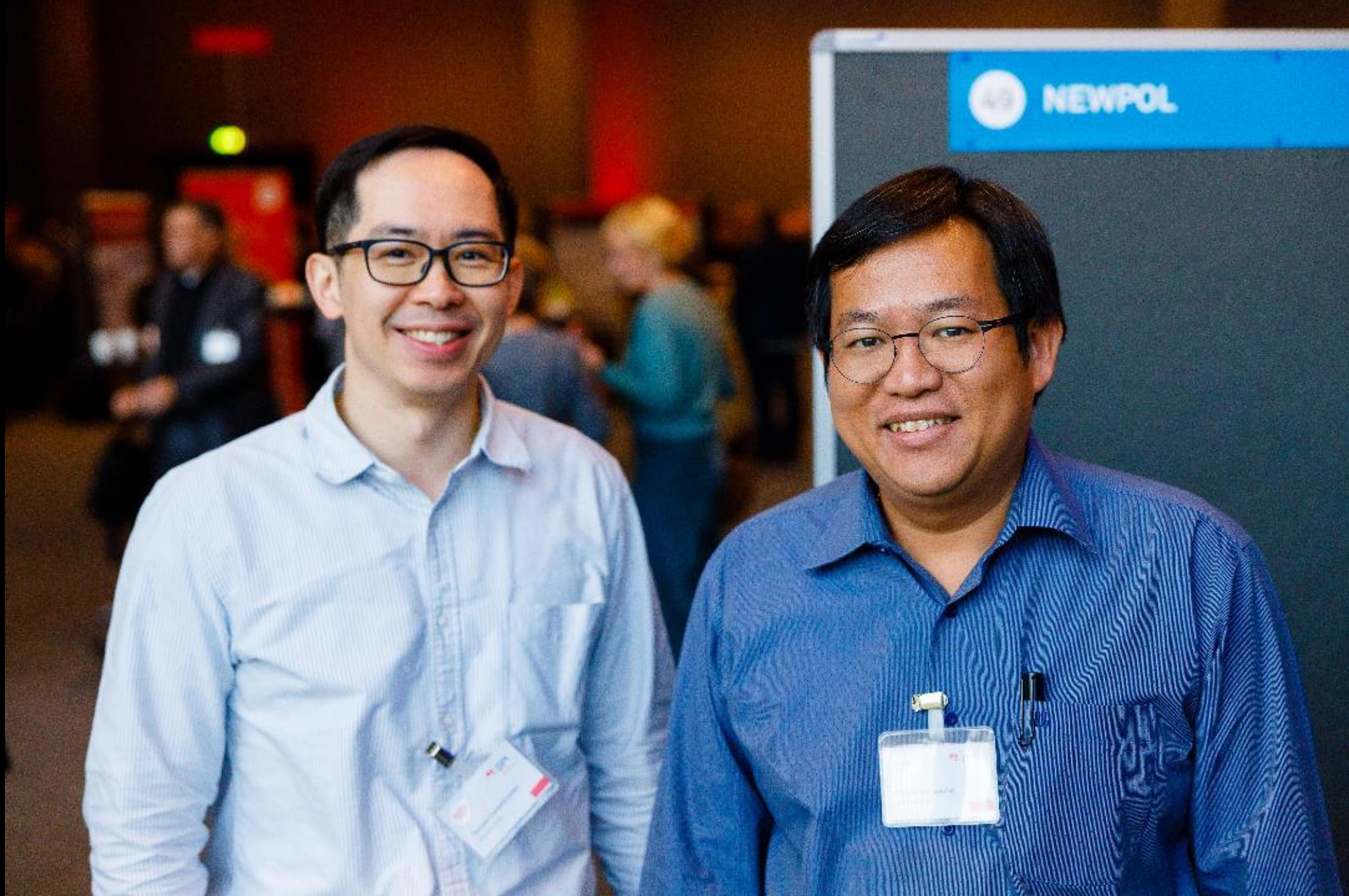


















**NEXT LEVEL**

Materials can be made by different ways; high atom efficiency, low cost, high performance, a range of properties, a range of reactivity

### Polyolefins

**DNP-SENS**

**Polyolefin structuring during melt film extrusion**



### Polyolefins

**DNP-SENS**




### Polyolefins

**DNP-SENS**

#### Surface Species in Ziegler-Natta Catalysts by DNP-SENS

Surface species in Ziegler-Natta catalysts by DNP-SENS

Project stages



Key findings and data points from the poster:

- Surface species in Ziegler-Natta catalysts by DNP-SENS
- Project stages: 1. Catalyst preparation, 2. Catalyst activation, 3. Catalyst deactivation
- Key findings: High atom efficiency, low cost, high performance, a range of properties, a range of reactivity
- Bar charts showing catalyst activity and deactivation rates
- Logos of participating institutions: DNP-SENS, DNP-SENS, DNP-SENS













## 35 Performance Polymers

### LONG-TERM PERFORMANCE OF FIBRE REINFORCED THERMOPLASTIC COMPOSITES

THESE COMPOSITES ARE USED IN A WIDE RANGE OF APPLICATIONS, INCLUDING:

- Automotive
- Aerospace
- Marine
- Construction
- Industrial

**KEY FEATURES**

- High strength and stiffness
- Lightweight
- Corrosion resistant
- Long service life

**TESTING METHODS**

- Compression
- Tension
- Flexure
- Impact
- Creep

**CONCLUSION**

These composites offer a significant performance advantage over traditional materials, particularly in terms of strength-to-weight ratio and durability.



Figure 1: Cross-section of composite

Figure 2: Cross-section of composite

Figure 3: Cross-section of composite

Figure 4: Cross-section of composite

Figure 5: Cross-section of composite

Figure 6: Cross-section of composite

Figure 7: Cross-section of composite

Figure 8: Cross-section of composite

Figure 9: Cross-section of composite

Figure 10: Cross-section of composite















































































FUNCTIONAL POLYMERS  
AND SURFACES

Functional  
Polymers and  
Surfaces

NEXT  
LEVEL

Polymer-based surfaces are applied  
in a growing number of applications.  
Added functional groups to these  
surfaces delivers enhanced properties  
for the use of these surfaces.

The surface  
means of  
an ink.

















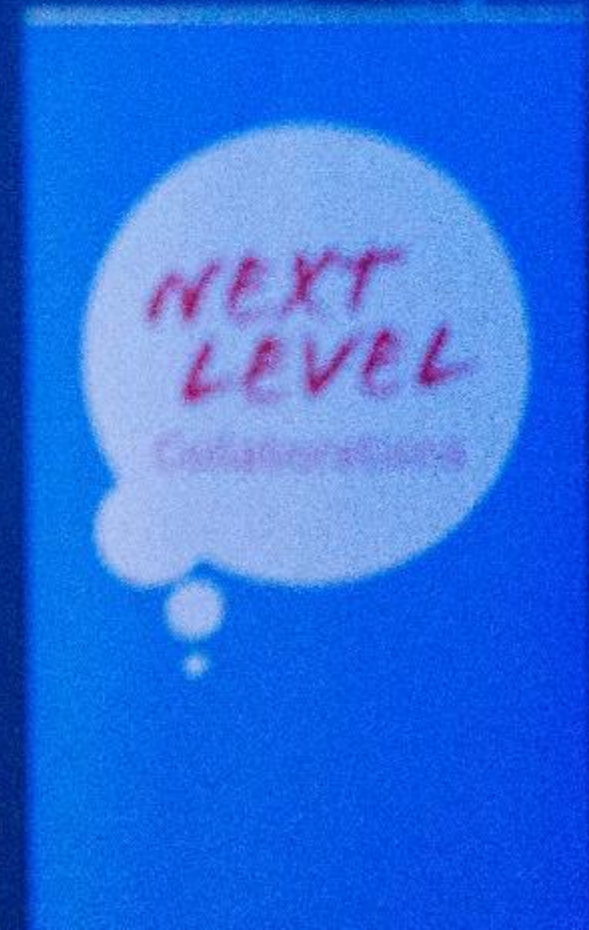






There are  
many  
ways  
to  
do  
this  
and  
it  
is  
not  
clear  
what  
the  
best  
way  
is  
at  
the  
moment





































Welcome to the  
**NEXT LEVEL**

**DPI**  
The Power of  
Responsible Leadership

**NEXT LEVEL**  
by DPI

**NEXT LEVEL**









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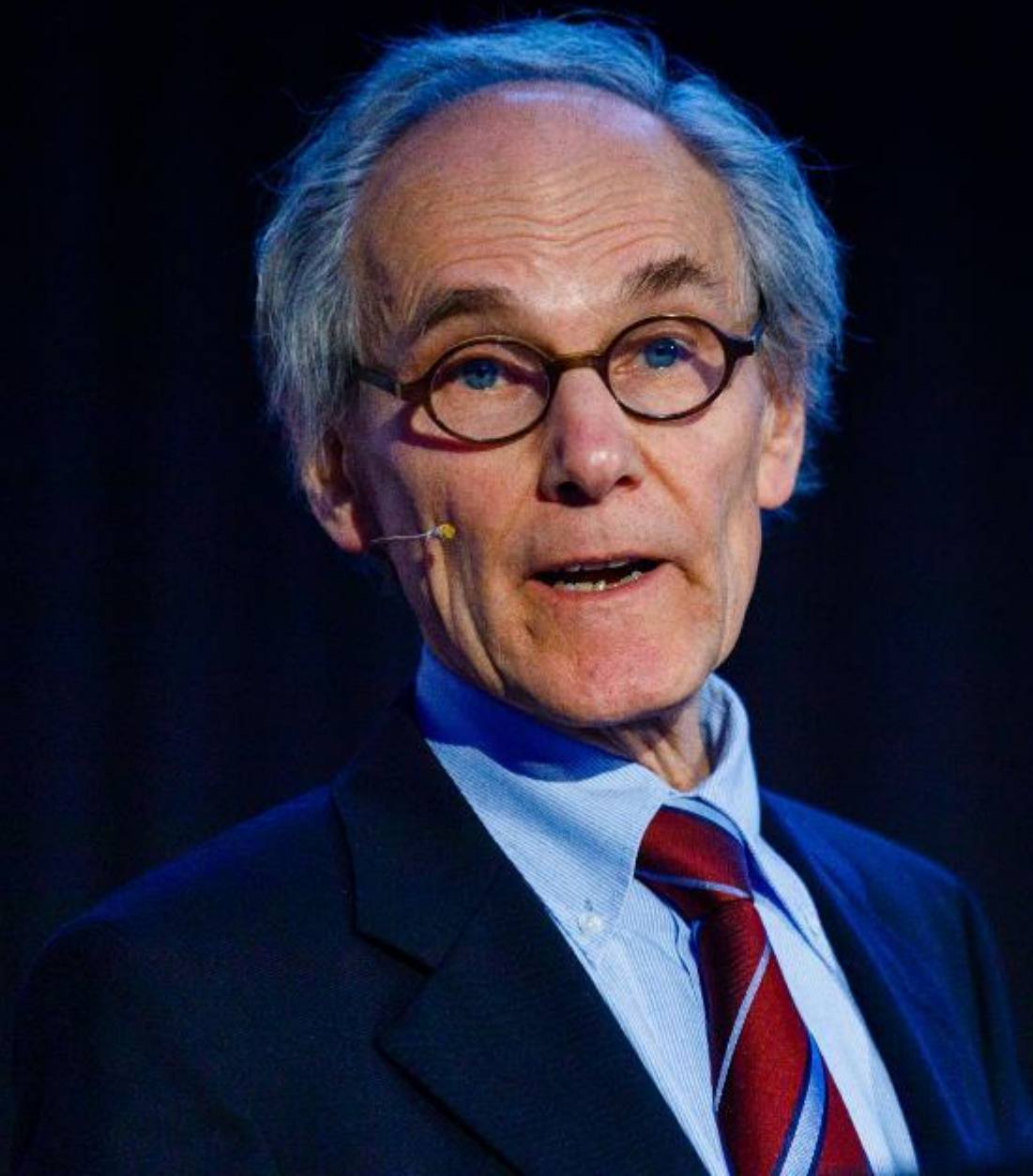




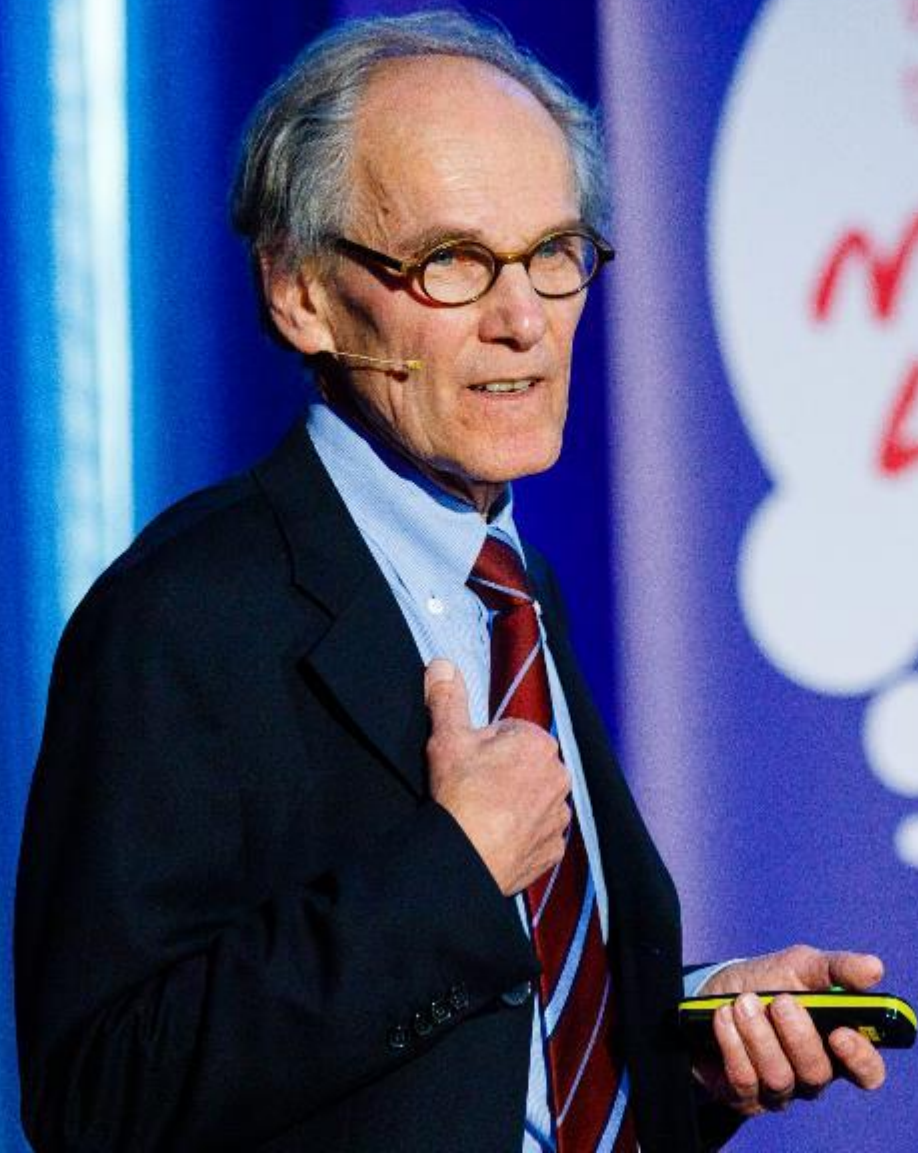












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**DPI**  
The Future  
Research Platform

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Dear  
Colleagues,  
It is a pleasure  
to have you  
here today.  
We are excited  
to announce  
the launch  
of the  
DPI platform.  
This platform  
will enable  
us to  
accelerate  
our research  
and  
innovation  
efforts.  
We look forward  
to working  
with you  
on this  
exciting  
journey.

**NEXT  
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Collaborations

























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Dutch  
Public  
Institute









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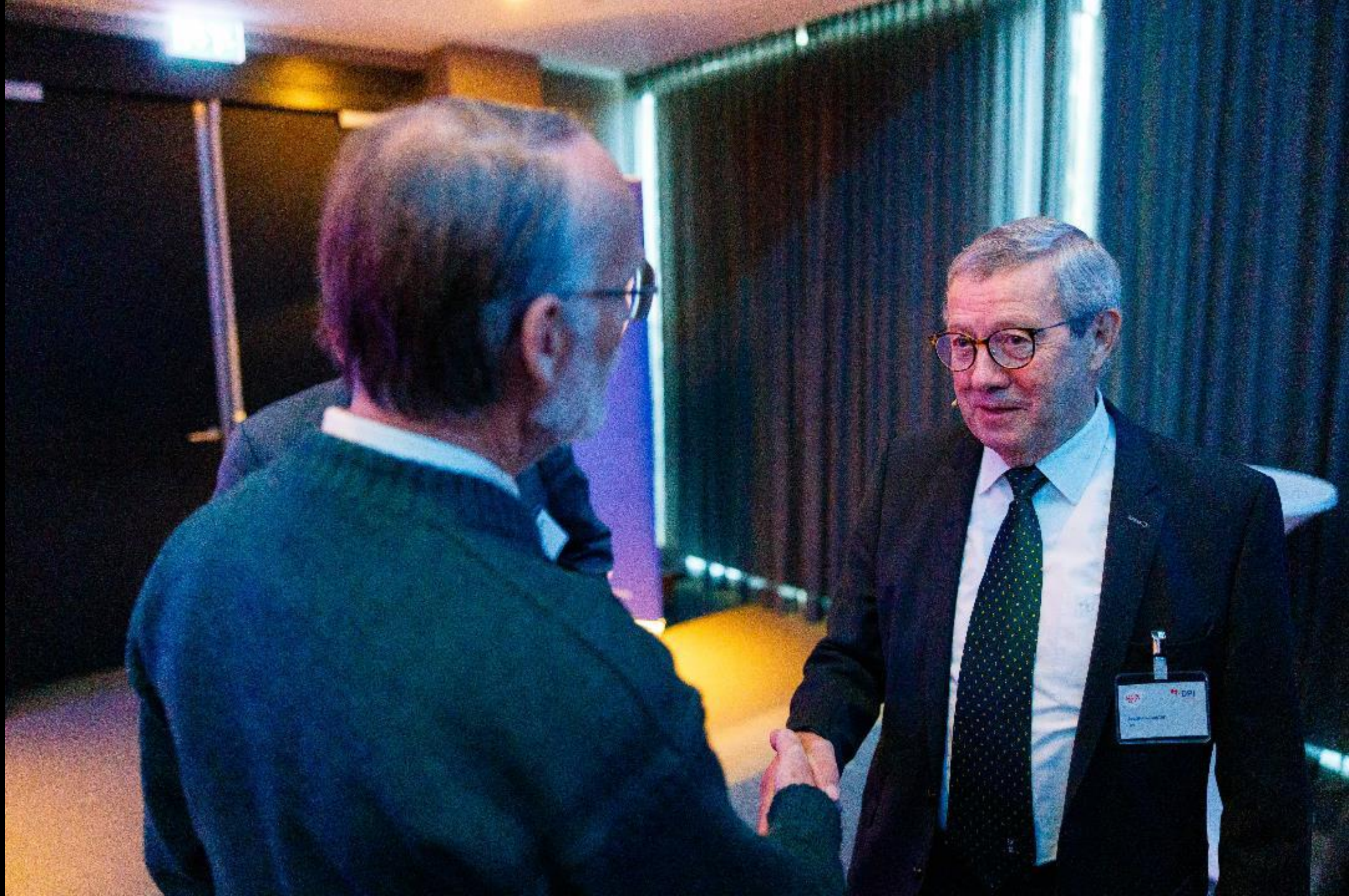
DPI







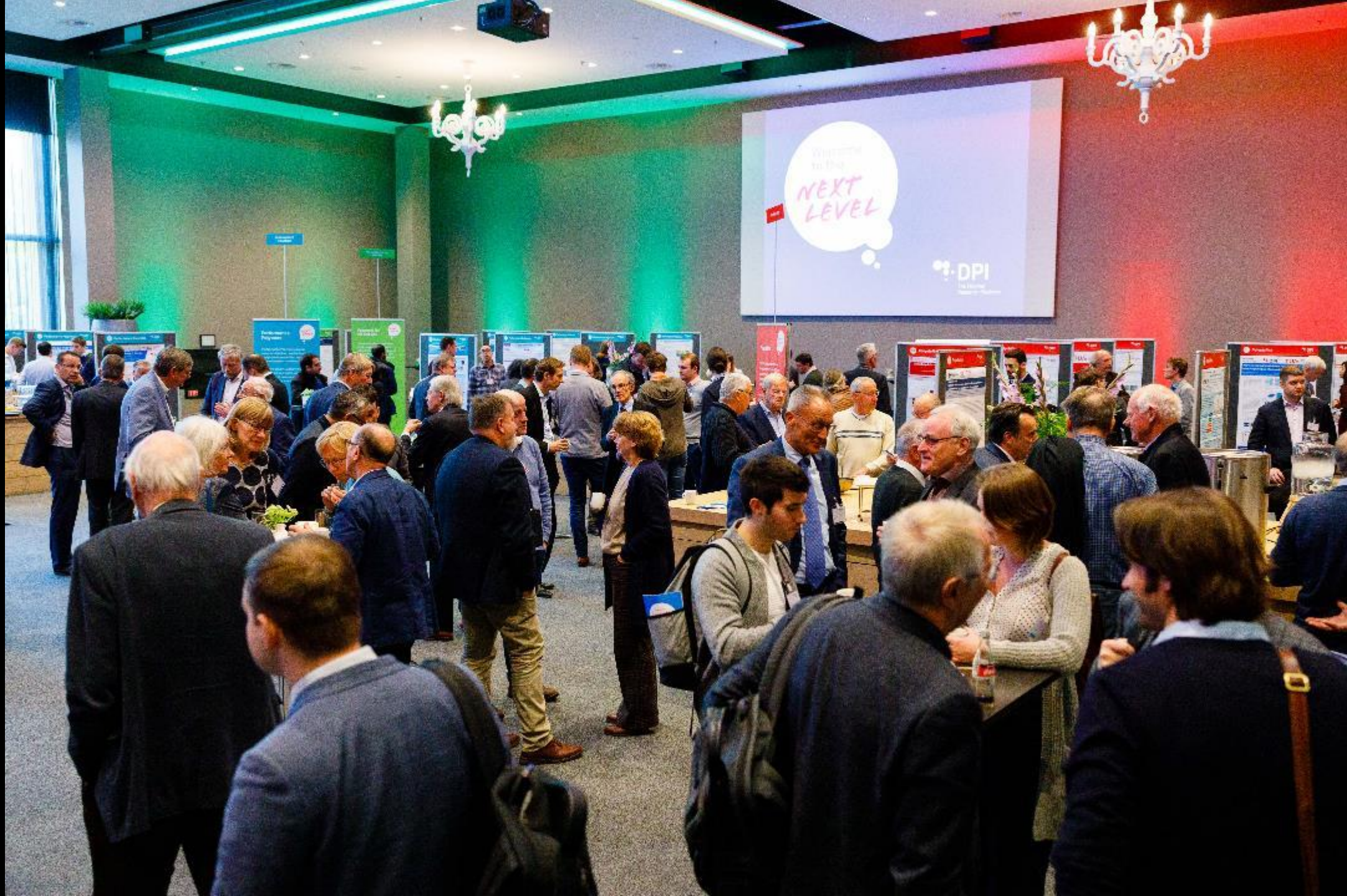














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**DPI**  
The Premier  
Business Platform

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**NEXT  
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collaboration

**DPI**  
The Premier  
Business Platform

































Welcome  
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Panel discussion with six participants seated at a long white table on a stage.

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DPI

PHILIPS

Panel of audience members seated in the foreground, facing the stage.



Dr. Benjamin Alpern - Senior Expert Product and Technological Development, Sibur Basic Polymers

Dr. Ellen de Brabander - Senior Vice President R&D PepsiCo

Prof. Vincenzo Busico - Full Professor of General and Inorganic Chemistry, Dept of Chemical Sciences, Federico II University

Fionn Ferreira - Chemistry student at University of Groningen and winner of several international science awards

Prof. John Grin - Programme leader Transnational Configurations, Conflict and Governance University of Amsterdam

Dr. Shahab Jahromi - Managing director Knowfort Technologies

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**NEXT LEVEL**  
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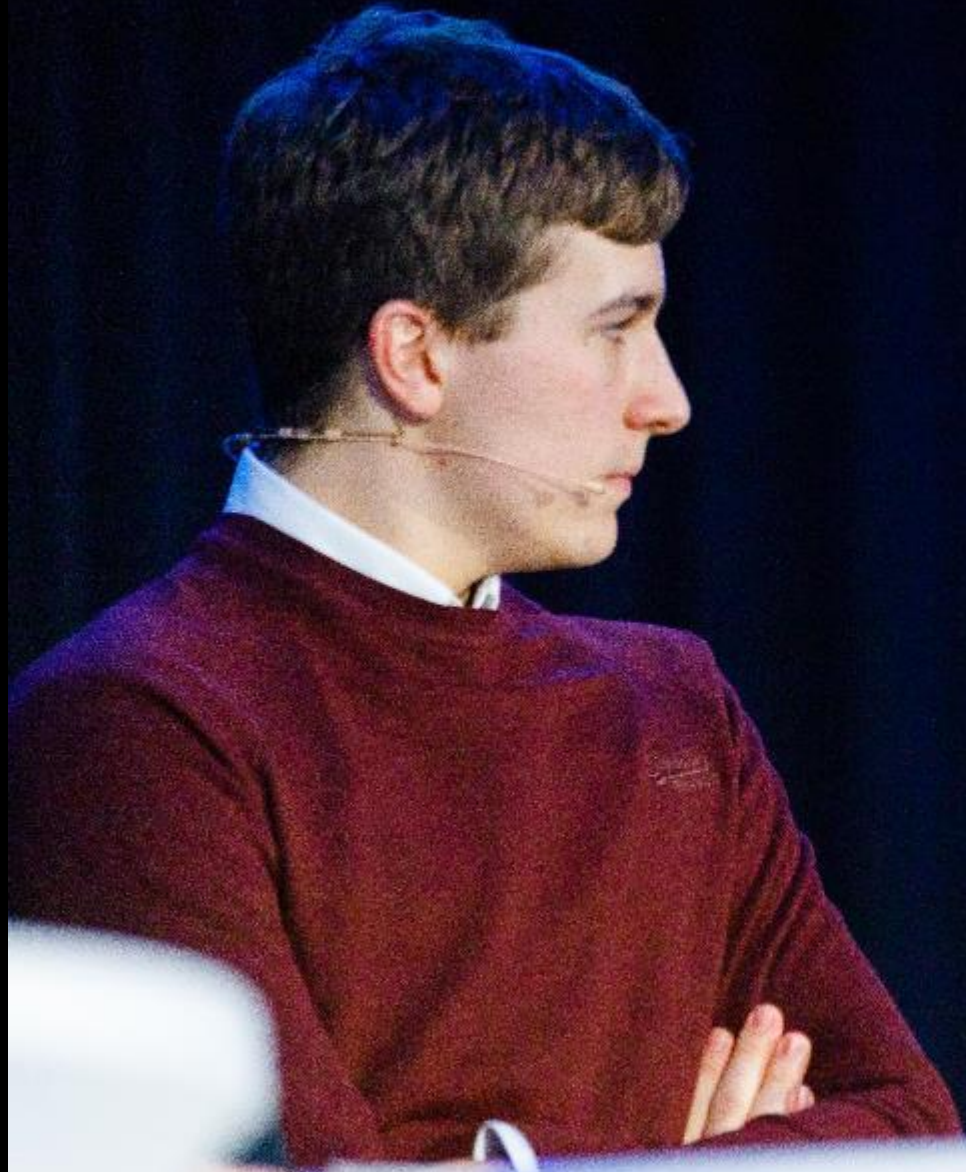
























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10:30 Panel Discussion 

- Dr. Benjamin Alperin - Senior Expert Product and Technological Development, Sabur Basic Polymers
- Dr. Ellen de Brabander - Senior Vice President R&D PipeCo
- Prof. Vincenzo Busico - Full Professor of General and Inorganic Chemistry, Dept of Chemical Sciences, Federico II University
- Floren Ferns - Chemistry student at University of Groningen and winner of several international science awards
- Prof. John Grin - Programme leader Transnational Configurations, Conflict and Governance University of Amsterdam
- Dr. Shahab Jahromi - Managing director Knowlurt Technologies



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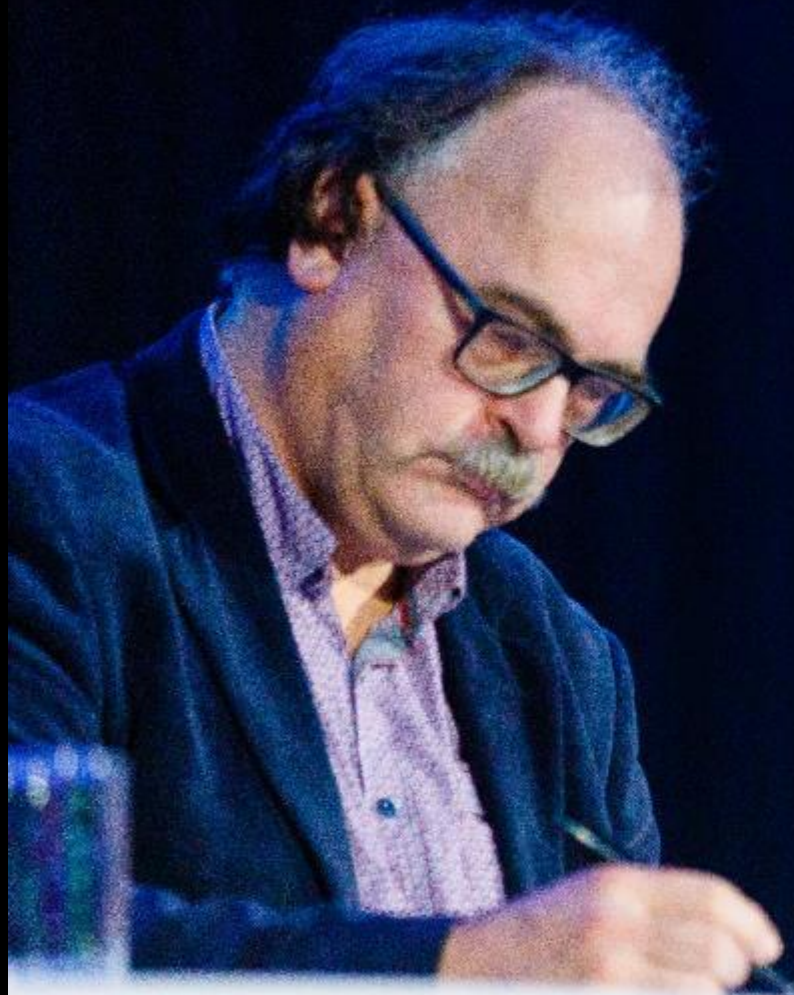




















Executive leader Transnational Corporations,  
Committee and Governance University of Amsterdam  
Dr. Shahab Jahromi - Managing director Knowfort Technologies

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1. Business Strategy  
2. Business Model  
3. Business Plan  
4. Business Case  
5. Business Canvas  
6. Business Model Canvas  
7. Business Model Innovation  
8. Business Model Canvas (BMC)

THE NEXT LEVEL  
OF BUSINESS  
STRATEGY

THE NEXT LEVEL  
OF BUSINESS  
STRATEGY











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15:30 Panel Discussion 

Dr. Benjamin Alpern - Senior Expert Product and Technological Development, Sibur Basic Polymers

Dr. Ellen de Brabander - Senior Vice President R&D PipeCo

Prof. Vincenzo Busico - Full Professor of General and Inorganic Chemistry, Dept of Chemical Sciences, Federico II University

Fiorin Ferraresi - Chemistry student at University of Groningen and winner of several international science awards

Prof. John Grin - Programme leader Transnational Configurations, Conflict and Governance University of Amsterdam

Dr. Shahab Jalecom - Managing director Knowledge Technologies

































NEXT LEVEL

## What we do

- Enable companies to work together to gain insights in the understanding of
- competitive knowledge
- Strong companies to a
- tion
- process
- the admin



































































































































  **DPI**  
Michelle Dunning  
Member of Georgia  
Workforce System



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Collaborations





































































































































