

Session: Welcome and Opening  
Presentation by: Christiaan Bolck, *Director BPM*  
*Chairman of the symposium*

---

Title: **Introduction to the BPM programme**

Author: **Christiaan Bolck**

Contact details:

Christiaan Bolck  
Program Manager Materials  
Wageningen Food & Biobased Research  
P.O. Box 17  
6700 AA Wageningen  
The Netherlands  
T +31 317 480229  
E christiaan.bolck@wur.nl



Curriculum:

Christiaan Bolck, has over 15 years of experience in product and market development regarding materials and products from biobased resources. As programme manager biobased materials within the applied research institute Wageningen Food and Biobased Research, he is currently responsible for the research and development activities at Wageningen UR in the field of biobased materials, such as bioplastics, paper, pulp, and building materials. He is director of the Biobased Performance Materials programme and is coordinating the Biobased Materials R&D activities within the Dutch topsectors. In addition, he is currently a member of the “Expert group Biobased Products” of the European commission (since 2008), Advisory Board lectorate polymer technology at the hogeschool Windesheim (since 2008), member of the advisory committee on (green) taxation scheme of packaging waste (since 2008), Consultant Biopolymers at the Dutch Polymer Institute value Centre (since 2007), and Consultant “governmental policy on the biobased economy” for the Dutch ministry of Economic Affairs (since 2004).

---

Abstract:

The Biobased Performance Materials (BPM) programme fills an important gap in biobased research; i.e. dedicated research into biobased performance materials. It is unique in its construction: Industrial partners participate in kind from all parts of the value chain, varying from raw materials producers, polymer producers and processors until end users. The BPM programme started in 2010 and is sponsored by the Dutch Ministry of Economic affairs (EZ). Initially, 36 partners worked together in 8 different R&D projects. This approach proved successful and in 2015 the Chemistry of Advanced Materials council of the Top Sector Chemistry gave the green light for nine new projects. In these projects, Wageningen Food & Biobased Research, together with 25 industrial partners, will be focusing on materials made from plant-based raw materials. Other activities of the BPM programme include information, education, collaboration and identifying new topics.

---

# Background



- PPP coordinating R&D activities in the Netherlands on biobased Performance Materials
- Initiated by Wageningen UR - Food and Biobased Research
- Fills an important gap in research that catalyzes the biobased economy
- Is unique in its construction: industrial partners participate actively from all parts of the value chain
- Start in 2010 & 2<sup>nd</sup> tranche 2015
- Sponsored by the “Topsector” Chemistry



# Goal & Scope



*Cost competitive biobased performance materials  
with substantially improved properties profile*

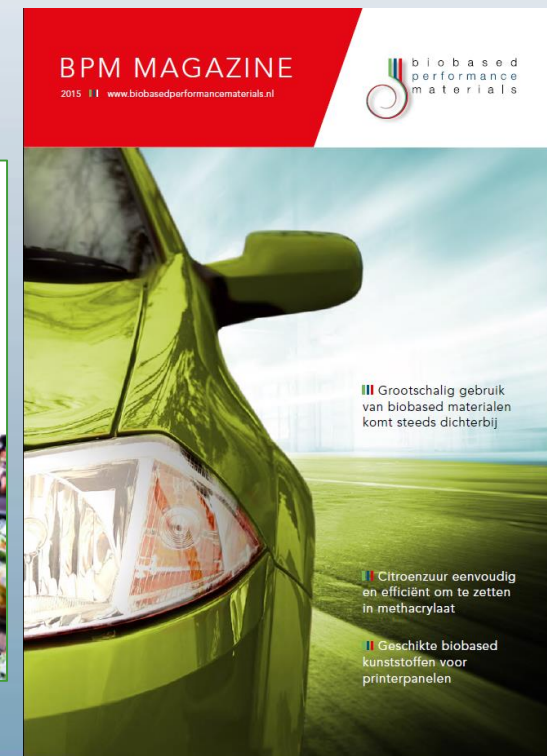
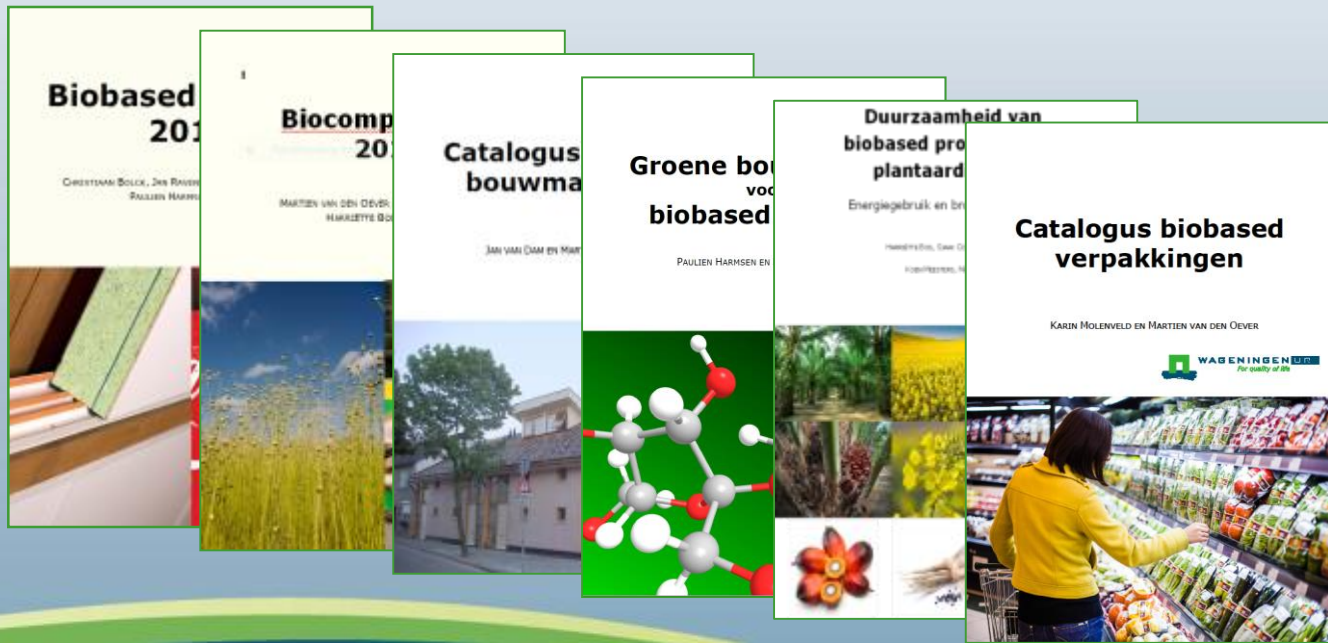
- Using functionality in biomass
- Using unique structures available in biomass
- Low temperature transformations (wherever possible)
- No biocrude or syngas
- With focus on Products, Materials, Polymers, Monomers
- Circular approach



# Output



- New building blocks, polymers, compounds and end products
- Patents, scientific publications, posters, etc.
- Books on plastics, composites, building materials, chemical building blocks, packaging and sustainability of plant derived oil products





# Current Projects (1)



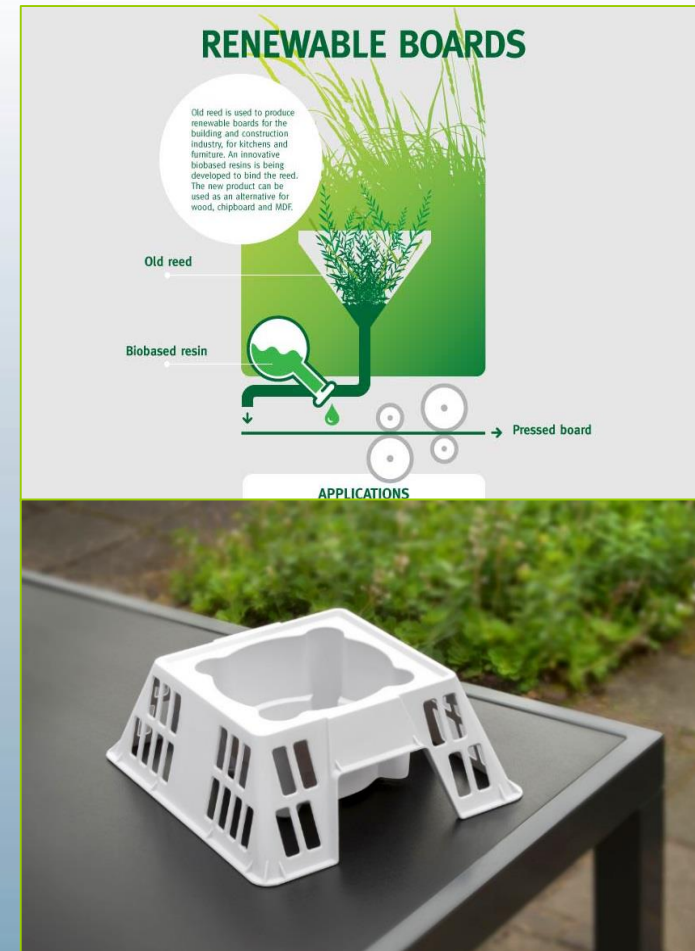
- **MAGIC** : Rail fastening systems : Edilon Sedra, Croda
- **HIPPIE** : High performance polymers from isoidide : ADM, DuPont, HCA
- **SPECIFIC** : Starch PE films with Improved barrier : AVEBE, Sabic
- **DISCOVER** : Covering materials for Roofing : Icopal, Stichting DAKlabel
- **BIOPRINT** : 3D printing : Océ, ADM



# Current projects (2)



- Glue Reed : Renewable boards  
DSM, Natuurmonumenten,  
Compakboard, CS process eng.
- MethaForm : Biobased itaconic acid  
and methacrylic acid  
ADM, EOC, Van Wijhe Verf
- APPS : Applications for PBS  
Reverdia, Promens, Teamplast
- FOAMEX : Extrusion foaming  
Synbra Technology, Nomacorc,  
Sulzer Chemtech



# New developments



- Biobased & Circular (end of life & sourcing)
- BPM Polymerisations Pilot Plant initiatives
  - Biobased Delta : South West Netherlands
  - BERNN : Bio Economy Region Northern Netherlands
- GO Chem : Biobased 4 SME
- Kick off BPM3 : workshop > 25 pitches
  - Wageningen Food & Biobased Research & TNO
  - Universities Delft, Groningen, Maastricht & Wageningen



# Symposium 2017



- Recent market introductions and new developments to be expected on biobased materials
- Insight in R&D strategies and how this helped, or will help developing markets for biobased materials



# Thank you



[christiaan.bolck@wur.nl](mailto:christiaan.bolck@wur.nl)

+31 317 480229

[www.BiobasedPerformanceMaterials.nl](http://www.BiobasedPerformanceMaterials.nl)