

This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No. 645993.



- PILOT

Navigates you through nanocomposites

CO-PILOT

Open Access Colloidal Nanoparticles Pilot Lines

 **Brightlands
Materials Center**

THE NANOPARTICLE KITCHEN

powered by **TNO** innovation
for life 

powered by  **Fraunhofer**
ISC

What is Co-Pilot?

- FILM – 3 minutes

See also link at

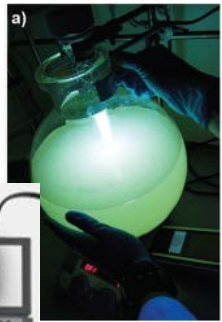
www.h2020copilot.eu

or

<https://www.partikel.fraunhofer.de/en/news/fraunhofer-isc-nanoparticle-kitchen.html>

<http://www.brightlandsmaterialscenter.com/programs/sustainable-buildings/>

Offer: Infrastructure and services in DE & NL



NP
synthesis

NP
modification

NP
masterbatch

NP
foil

g - kg

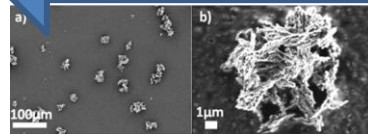
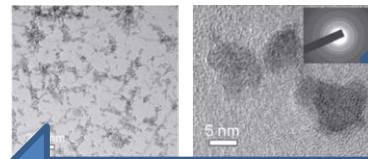
g - kg

g/ml -
kg/l

cm² - m²

THE NANOPARTICLE KITCHEN

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Analytics

Many different applications/ products

CHALLENGE: support SME in starting!!!

Technology Readiness Levels

- TRL 0: Idea.** Unproven concept, no testing has been performed.
- TRL 1: Basic research.** Principles postulated and observed but no experimental proof available.
- TRL 2: Technology formulation.** Concept and application have been formulated.
- TRL 3: Applied research.** First laboratory tests completed; proof of concept.
- TRL 4: Small scale prototype** built in a laboratory environment ("ugly" prototype).
- TRL 5: Large scale prototype** tested in intended environment.
- TRL 6: Prototype system** tested in intended environment close to expected performance.
- TRL 7: Demonstration system** operating in operational environment at pre-commercial scale.
- TRL 8: First of a kind commercial system.** Manufacturing issues solved.
- TRL 9: Full commercial application,** technology available for consumers.



Sustainable Buildings



anti soiling



anti heat



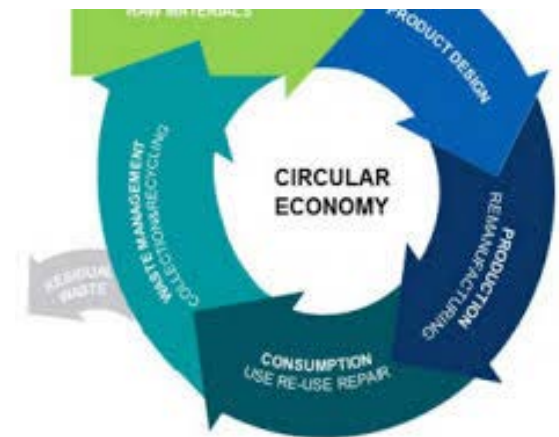
anti reflection



Safety



Chemical Recycling



Why EPPN?

- Building credibility at customers by providing the optimal solution for their purpose
- Use shared services
- Provide joint offerings to customers
- Building collaborations
- Exchange best practices



Continuation

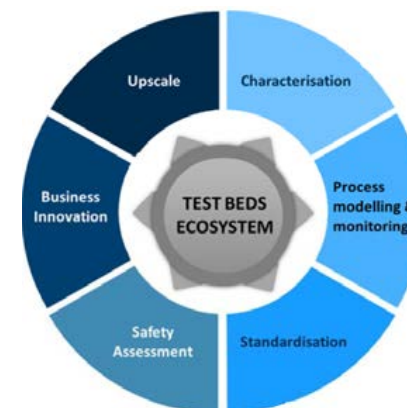


Open Innovation Program Sustainable Buildings
Mixed funding from Interregional Vlaanderen-Nederland
Limburg Province (EU Region), Ministry of Economic
Affairs, Private companies

THE NANOPARTICLE KITCHEN

Various ongoing B2B exploitation activities
Interreg or Bavarian project on processing of nanoenabled
plastics (planned)

H2020 Open Innovation Test Bed (in preparation)

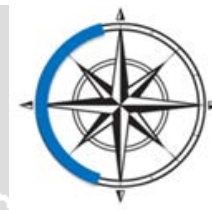


Continuation

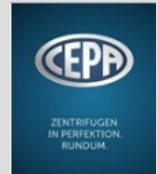


- Attracted 5 million euro from investors in 2015-2017
- Demonstrated 1.000 liter PET chemical recycling plant
Expect a 10.000 ton/year plant in 2021
- Expecting 2 million euro annual turnover in 2021 from the nano-composites demonstrated through Co-Pilot
- Expecting 1,5 million euro annual turnover in 2021 from sales of pilot equipment that was developed in the framework of Co-Pilot

Team



- PILOT
Navigates you through nanocomposites



Brightlands



Würzburg



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Actions

- Booth exhibitions, presentations, newsletters, website
- Workshops given by Co-Pilot partners
- Small trial projects with other companies
- Market segmentation and selection
- Creating propositions
- Plugging into the European ecosystem



Continuation



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THE NANOPARTICLE KITCHEN

Co-Pilot
consortium
companies

Other
companies

Spin-out
companies

End-users / consumers