

Topchim

Innovative coating solutions



Research & Development company in paper coating

- Head office and Research Lab in Antwerp, Belgium
- Office and Lab in Sao Paolo, Brazil

Production

- Two production sites in Belgium
- One production site in Slovakia
- One production site in Brazil

Supporting paper and board producers:

- Solving coating runnability problems
 - Increasing coater speed
 - Increasing coating solids
- Developing new printability solutions
 - Improving digital printing
- Developing ecological barrier solutions

Continuous **innovation**

in **ecological barrier solutions** and

development of **100% recyclability**

- Growing ecological awareness of both consumers and industry
- Introduction of Eco labels on packaging
- Applied taxes on use of mineral oil based plastics
- Increasing need for recyclability, biodegradability and use of bio-renewable materials

TopScreen

Nano-dispersed Biopolymer in water



Environmental challenge:

Substitution of environmental unfriendly materials in paper and board packaging with a good repulpable & recyclable alternative for:

- Wax emulsions / paraffin's
- Extruded PE

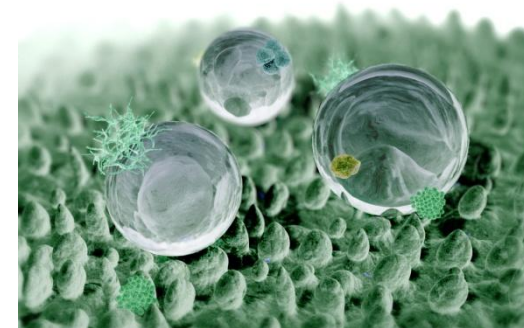
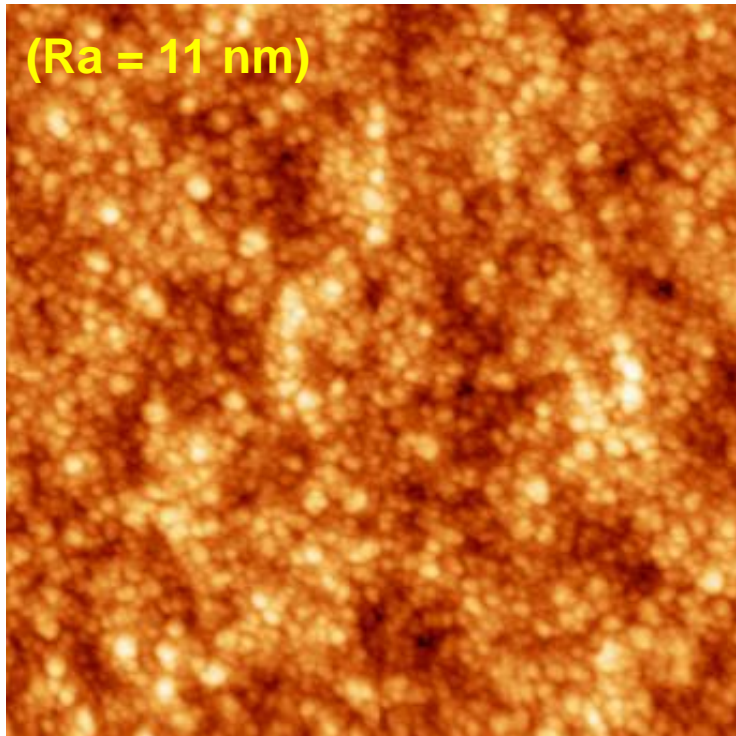
Environmental solution

Water based nano-dispersed biopolymer (vegetable oil)

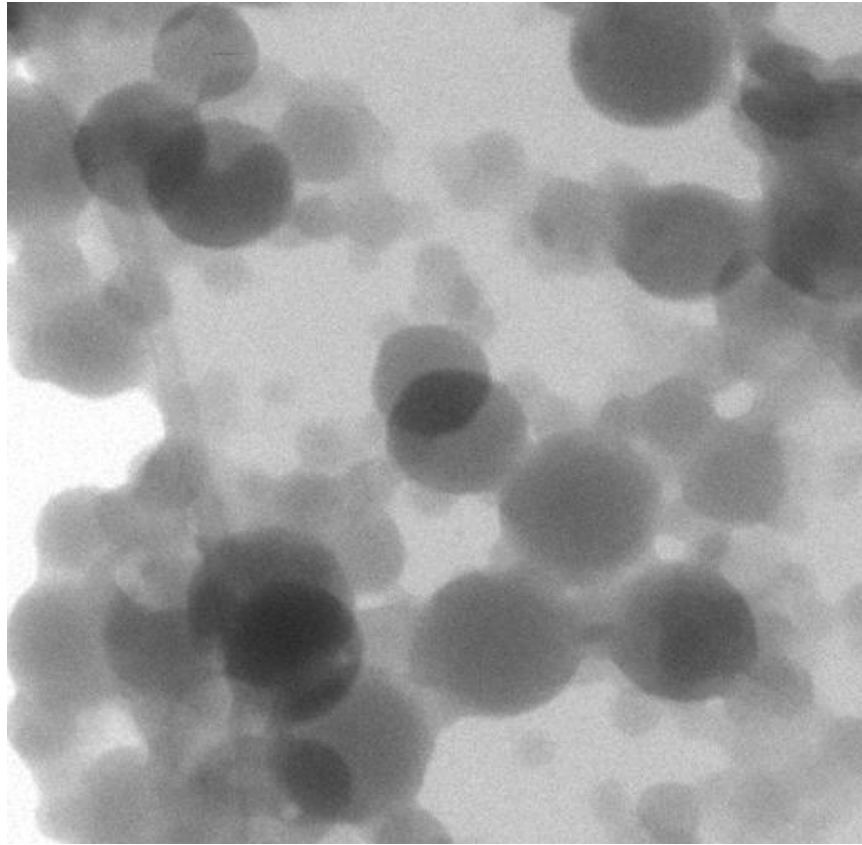
- High solid content without use of surfactants
 - High bio-renewable content (up to 70%)
 - Approved for food contact
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- Alternative for wax and PE on paper and board packaging to increase recyclability
 - Applicable on online/offline coaters (compared to outsourced wax treatment or PE-extrusion)
 - 100% repulpability of waste

Technical solution

- Excellent hydrophobic properties showing a “Lotus effect” or “nano-roughness”



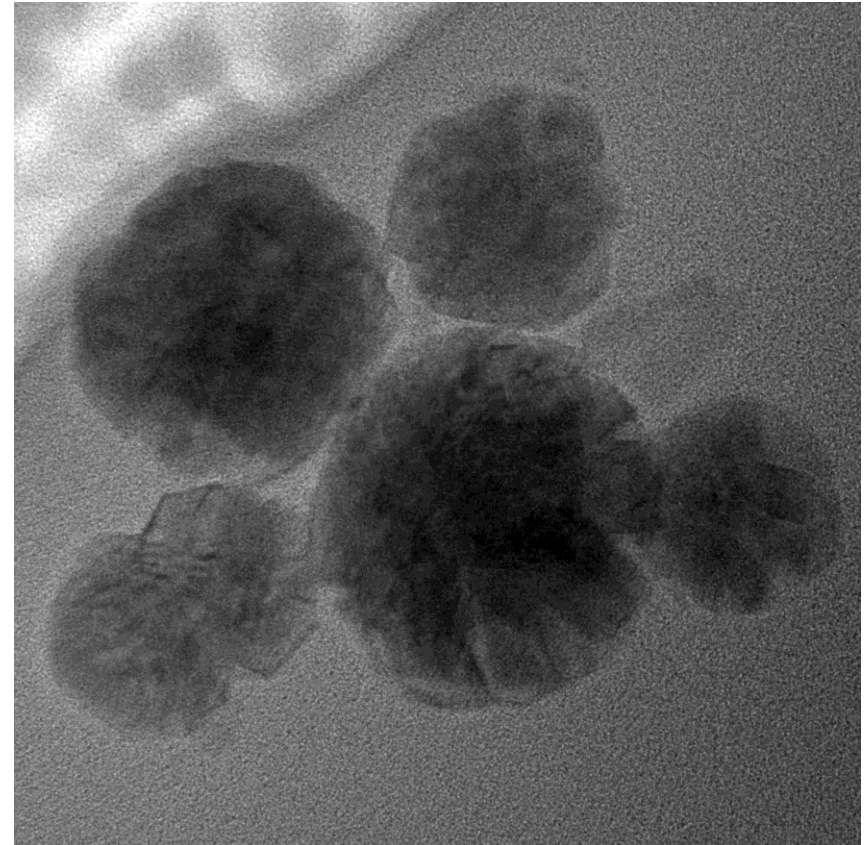
Pure SMI particles



100 nm

Diameters 60 nm to 90 nm

Hybrid SMI(30%) / oil(70%) particles



20 nm

Diameters 40 to 60 nm, open porous structure

Applications

- Corrugated board and boxes for fruit and vegetables
- Frozen food packaging
- Beverage cups and food plates
- Precoat for siliconised paper
- Liquid packaging
- Meat, Poultry and Fish wrap
- Compostable waste packaging (home recycling)
- Pizza and fast food containers



- Eco²Chem : EFRO project essencia ism VITO en UGent (3/2010 t.em. 2/2012)



met steun van het
Agentschap Ondernemen

- Inventarisatie eco-efficiëntie meetmethodes
- Aftoetsen van deze meetmethodes in 3 proces cases en 3 product cases
 - Cold drink paper cup case Topchim
 - Stand van zaken: data verzameling en doorrekenen van meetmethodes ongoing
- Opstellen van een on-line beslissingsmatrix om bedrijven op een objectieve manier te leiden naar de meest geschikte meetmethode
- Roll-out van de online tool