

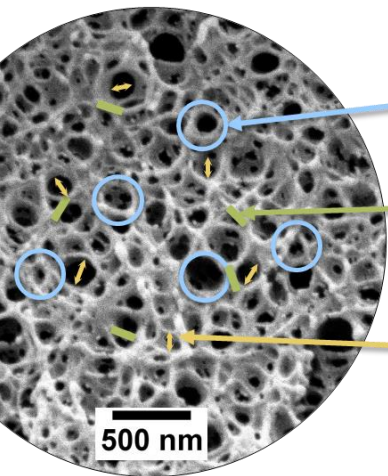


nCell

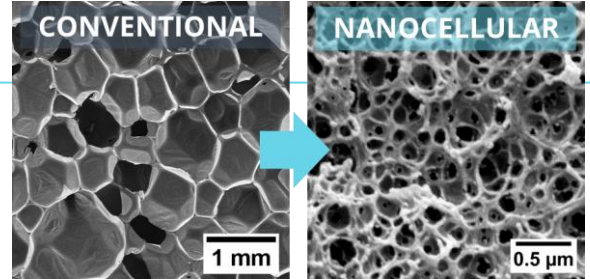
NEW TECHNOLOGY TO PRODUCE NANOCELLULAR POLYMERS BASED ON PMMA THAT CAN BE TRANSPARENT AND THERMAL INSULATORS AT THE SAME TIME

KEY ASPECTS

A NOVEL GENERATION OF MATERIALS WITH CELL SIZES IN THE NANOSCALE SHOWING A UNIQUE COMBINATION OF PROPERTIES



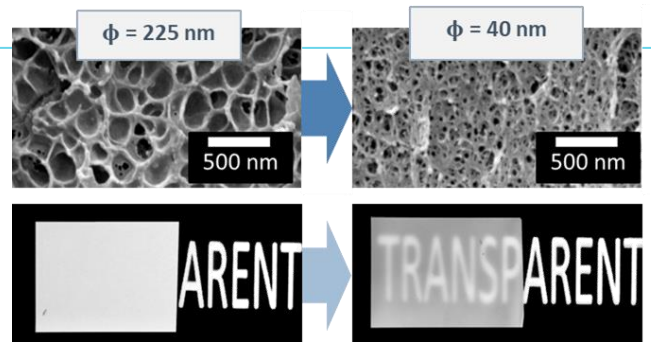
- Nanometric cells (confined gas phase)**
- Nanometric cell walls (confined solid phase)**
- Nanoscale effects (interaction with light or sound, high surface area, etc)**



DENSITY	100-450 kg/m ³
POLYMERS	Polymethylmethacrylate (PMMA)
CELLULAR STRUCTURE	Cell size from 15 to 500 nm. Open cell or closed cell. <ul style="list-style-type: none"> Reduced thermal conductivity due to Knudsen effect. Possibility of producing transparent foams (cell size < 50 nm). Enhanced mechanical properties at the same density. High surface area.
PHYSICAL PROPERTIES	

ADVANTAGES

- Unique materials that combine in just one single material **transparency and thermal insulation**.
- Thermoplastic materials that can be recycled.
- Excellent mechanical properties at low weight.
- Produced using conventional raw materials.
- Possibility of up-scaling.



POTENTIAL APPLICATIONS

- Thermal insulating boards.
- Core of VIPs panels.
- Substitution of silica aerogels in applications where transparency is needed.
- Transparent thin films.
- Panels with high a stiffness and a low weight.
- Support for catalysis and sensors.
- Filters with adjustable pore size.
- And much more!

CONTACT US FOR MORE INFORMATION

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