

Potential of the equipment acquired at CIT KH and suggestion of ideas for collaborative projects

Some axes of innovation for the development of collaborative projects

Development of new functionalities on existing products by surface treatment

Development of non-woven filters: medical masks, automotive filters, industrial filters, etc.

Development of antibacterial and anti-odor insoles

Development of composite 3D structures in tissue engineering

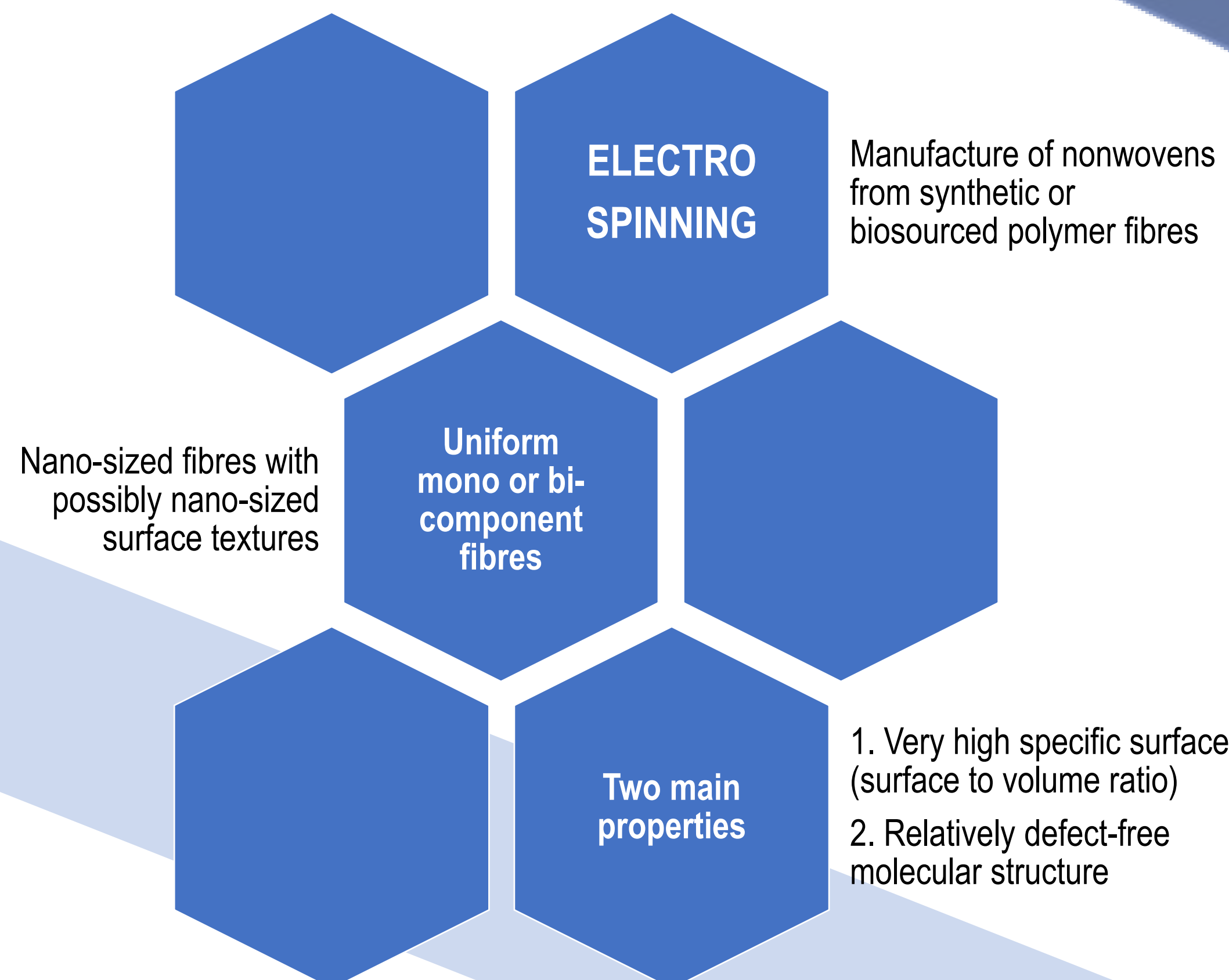
- In collaboration with partners specialized in biology

Development of functional dressings made of nanofibres

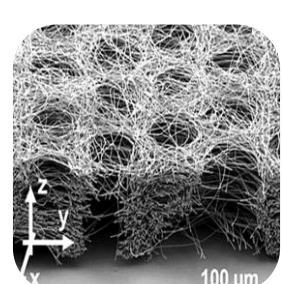
- In collaboration with partners specialized in medicine

Development of connected, heated, LED light clothing, etc.

- In collaboration with partners specialized in IOT/Electronics



Meditech



The electrospun scaffolds made for tissue engineering applications can be penetrated with cells to treat or replace biological targets.



Nanofibre dressings have an excellent ability to insulate the wound against microbial infections.

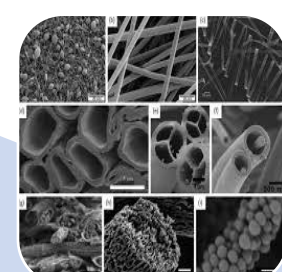


Textile sutures can also be produced by electrospinning.

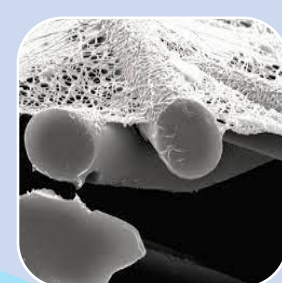


Addition of a drug substance is possible in the electrospun solution or when melting various fibrous drug delivery systems (implants, transdermal patches, oral forms).

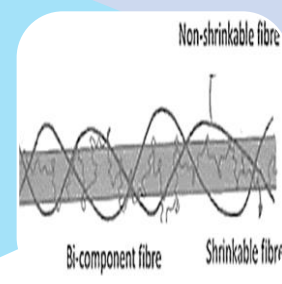
Indutech, Clottech, Buildtech



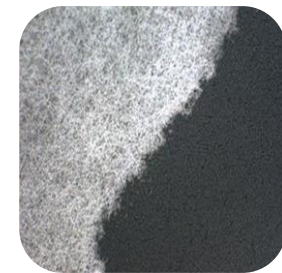
The nanoscale structure of electrospun fibres induces a different behavior of "macro-materials" when interacting with other compounds.



Electrospun materials are particularly suitable for activities requiring a high degree of physical contact (such as to accommodate chemical reactions or capture small particles during physical entanglement filtration for example).



Electrospinning has the potential to produce nonwovens that can be incorporated into garments. This introduces multi-functionality by mixing electrospun fibres.



Thanks to their defect-free molecular structure, electrospun fibres make it possible to manufacture high-performance (long-fibre) composite materials.

Clottech, Homotech, Mobiltech



Direct embroidery on finished garments with a personalization offer in line with Industry 4.0



Wide range of visual creations (reproduction of photographs and paintings, compatibility with computer graphics software) for the field of fashion and decoration.

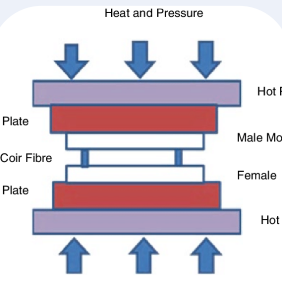


Development of connected textiles using ultra-thin conductive wires connecting sensors, integrated circuits and electronic components.



Wires and pipes for the production of heating or cooling systems in car seats or protective vests can be laid.

Thermoforming, Thermobonding



Shaping of composites in technical granules filled by compression at high temperature in a hollow mold having the shape of the desired final specimen.



Cross-linking under high pressure and temperature of a thermosetting matrix for maintaining composites in a sandwich structure.



Consolidation by thermobonding of a non-woven structure obtained by carding/needling and containing thermofusible fibres.



Shaping of a composite consisting of a non-woven structure that reinforces a thermoplastic matrix for a bio-based composite.

