INJELEC

INNOVATIVE TECHNOLOGY
BOOSTED BY CONECTUS

ELECTROCONDUCTIVE FILLER

EASILIY PROCESSABLE

USABLE IN THERMOPLASTIC MATRIXES

COMPETITIVE WITH CARBON BASED CONDUCTIVE POLYMER

Our innovation

- The principle of INJELEC is to synthesize a conductive polymer such as PEDOT on a specific substrate to create **electrically conductive polymer fillers**. These fillers are incorporated into plastic matrixes providing the following benefits:

✓ **HIGH CONDUCTIVITY**
✓ **FLEXIBILITY**
✓ **LIGHTWEIGHT PROPERTIES**
✓ **LOWER MATERIALS COSTS**
✓ **EASY TO PROCESS USING HIGH SPEED PLASTIC MANUFACTURING TECHNIQUES (e.g. 3D Printing)**

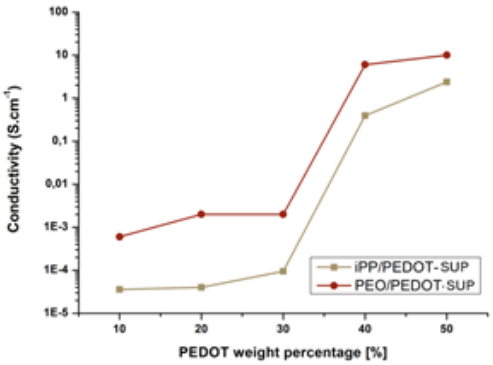
- In our new process, the PEDOT is directly synthesized on the substrate thus avoiding the solvent based processing of PEDOT.

So far, the INJELEC concept & benefits have been demonstrated in PEO and PP

- Conductivity of the filler : 80S/cm
- Conductivity of the thermoplastic composite (50w% filler)
- Maximum temperature of use : 230°C

PEO/PEDOT 12 S/cm

PP/PEDOT : 2.5 S/cm



Potential applications : from composite conductivity of 0,01 to 100 S/cm

- 3D Printing [PLA]
- Printed electronic circuits
- Bipolar plates for fuel cells
- Sensors , actuators

Key project milestones

DONE / TO BE DONE

pre-maturation project

Maturation program (Conectus funding)

02/2024	11/2024	2025	2026	
	Kick-off Maturation program		MVP	Technology transfer

POTENTIAL APPLICATIONS

ELECTRONICS INDUSTRY, ENERGY…

TRL

3

LAB P.O.C

TEAM

Dr. Thibault PARPAITE
Associate Professor
Institut Charles Sadron - INSA
University of Strasbourg – CNRS

IP2 team: Polymer engineering and process intensification

We are looking for :
a **joint development**

We offer an exclusive licensing option agreement including	We expect a co-development effort including
- **Joint development** - **Right of first refusal** - IP managed by Conectus **in accordance with licensee strategy** - **Commercial use** on defined fields/applications and territories	- A **Technical support** to reach the **development target:** successful preclinical tests - **Financial compensation** (to be defined together) **deductible from future licensee fees**

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