

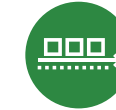


APPLICATIONS:



ENERGY & TRANSPORT

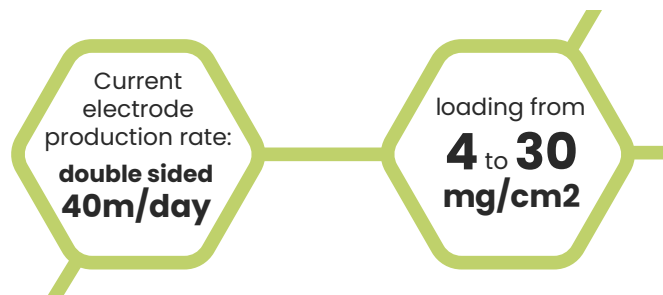
DEVELOPMENT:



PROCESSING

CURRENT-STATUS

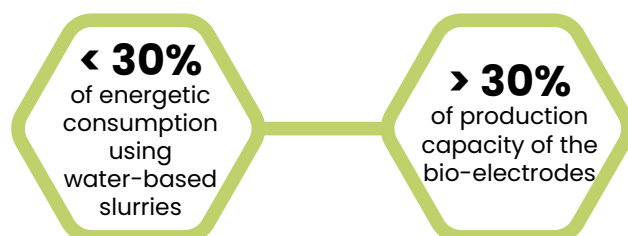
CIDETEC owns a pilot plant for the production of electrodes for energy storage devices. This pilot plant is equipped with very flexible application systems, which allow working with different materials and different ink formulations including biomaterials and water based processing.



CHALLENGE

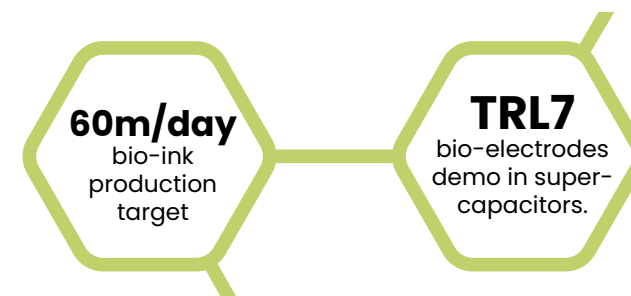
Most of the materials used in the formulation of the inks are standard. The substitution of non-ecofriendly materials from actual electrode formulations, involves laboratory-scale development and subsequent scaling up.

The obtention of electrodes with the appropriate loading, porosity and microstructure, will require the appropriate knowledge of the application, drying and compaction processes in water based electrodes.



FURTHER DEVELOPMENT

The manufacturing of roll to roll electrodes of at least 60m length that will be tested in industrial sized ultracapacitor cells. This electrodes will be produced using novel cellulose in water-based slurries.



BENEFITS FOR COMPANIES AND SME'S

The pilot line will allow companies developing new materials and electrodes, based on water processing and bio-based slurries, to manufacture electrodes in order to evaluate their performance, production methods and cost. The pilot line services will allow SMEs and companies to optimize and test new products or manufacturing processes.

APPLICATION EXAMPLES

ELECTRODES FOR ENERGY STORAGE DEVICES

The coating Pilot line will produce roll-to-roll coated electrodes, using water-based slurries from carbon nanomaterials of biological origin to be used in ultracapacitors.