

Efficient and flexible thin film piezoelectric PZT micro generator

PZT / ALUMINUM SUBSTRATE / POLYMER ENCAPSULATION



TECHNOLOGY

PZT is a traditionally preferred piezoelectric material due to its higher electromechanical coupling coefficients than other conventional piezoelectric materials. In order to reach low frequencies, it is crucial to increase the PZT flexibility.

This technology offer presents an easy and cost effective process which provides a flexible and efficient piezoelectric PZT micro generator.

The structure of the obtained PZT microgenerator is presented below.

APPLICATIONS

- Energy harvesting
- CND

STAGE OF DEVELOPPEMENT

Several PZT microgenerators have been carried out and their lead composition optimized.

INTELLECTUAL PROPERTY

French patent application filed in 2015

KEY BENEFITS

- Easy and cost effective process
- Flexible PZT micro generator
- Ability to work at low frequencies (between 0,1 HZ and 10 Hz)
- Efficiency of the device (microwatt per cm²)

LABORATORY

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Polymer

Superior Al electrode (300 nm)

PZT (3 µm)

Substrate, inferior Al electrode (16 µm)

CONTACT

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