Measure

# THIN PIEZOELECTRIC SENSORS 3 µm

*Measurement of the distribution of static charges inside dielectrics*

## Technological benefits

### Thin sensors (3 µm)

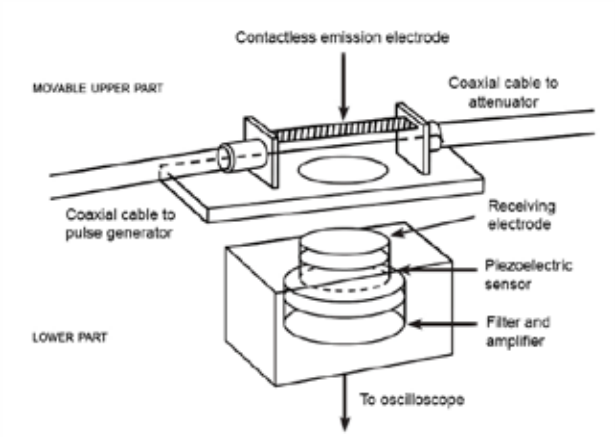
### Efficient & robust

Optimizing the PEA space charge measurement technique.

The sensor transforms the acoustic signal into an electrical signal while maintaining high sensitivity despite thinning, thereby improving spatial resolution.

### Innovative

Piezoelectric sensors thinner than conventional sensors.

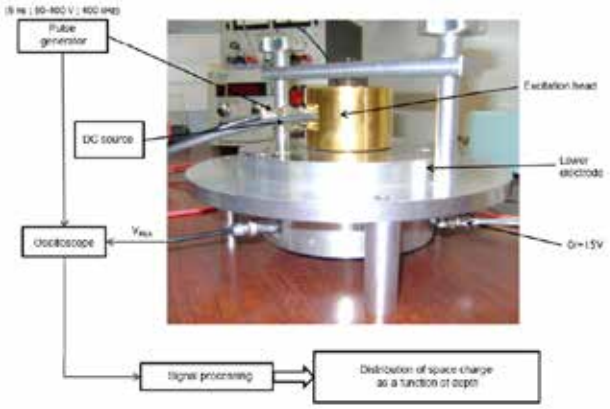



## Invention overview

One of the difficulties of the method is to be able to transform the acoustic signal into an electrical signal with high sensitivity. The invention is based on a new approach. A thin piezoelectric sensor made with a thin film to replace the thicker conventional sensors.

There are several problems with using a thin film sensor as: fragility, annealing temperature problem after deposition (PVDF) and loss of sensitivity.

The invention proposes an astute combination of the acoustic detector. The absorber part is both thin (low attenuation) and thick enough (delay line) to maintain good sensitivity and improve resolution.




## Commercial benefits

**High resolution and thin dielectric measurement of 20 to 50 µm.**

**More robust.**

**High sensitivity.**

**Prototype usable in industry.**

***TRL : 7***

*Patented invention, available under license*

## Potential applications

**Static charge detection: pharmaceutical industry, cosmetics, plastic film production, cable insulation, etc.**

**All uses of Piezo sensors.**

**High resolution measurement of acoustic propagation or attenuation to thin structures (<100µm).**

B1309


**For further information**

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