# A NOVEL PATTERN TRANSFER TECHNIQUE FOR MOUNTING GLASSY CARBON MICROELECTRODES ON POLYMERIC FLEXIBLE SUBSTRATES

### 1. Objective of work

To provide the possibility of transferring glassy carbon structures from a Silicon substrate to a

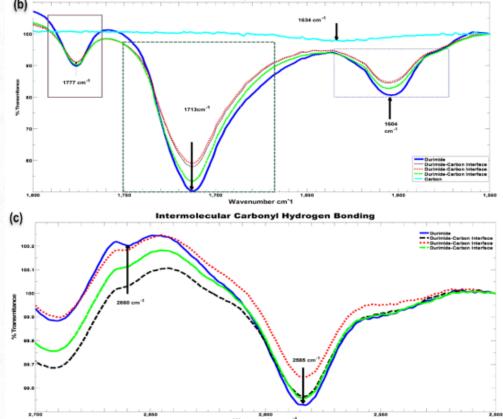
Polyimide one.

#### 2. Sample description

Array of glassy carbon electrodes fabricated by traditional photolithography and pyrolysis on silicon substrate. Then, 20 µm thick polyimide DuPont's PI2611 is spin-coated and cured at 350 °C under nitrogen for 2 h. The polymer is separated of the silicon one.

## 3. Equipment and conditions for FTIR

The FTIR is performed on solid samples through a diamond ATR crystal, ranging from  $4000\ cm^{-1}$  to  $650\ cm^{-1}$ . It was zoomed the sections of carbonyl area (1600-1800  $cm^{-1}$ ) and carbonyl hydrogen bonding (2550-2650  $cm^{-1}$ ) to check the changes on polyimide, carbon and composites.



#### 4. Results

A lower intensity on the peaks 1604, 1713 and 1777  $cm^{-1}$  implies a decrease of the three types of carbonyls in the spectra. As well, a broadening of peaks at 1605 and 1777  $cm^{-1}$  indicate carbon influence on the bending and vibrational modes of the polyimide carbonyl. Another broadening on the peaks 2585 and 2660  $cm^{-1}$  means that there is a unorganized interaction between polymer chains.