**Electronic Supporting Information**

# Radical diffusion engineering: tailored nanocomposite materials for piezoresistive inkjet printed strain sensors

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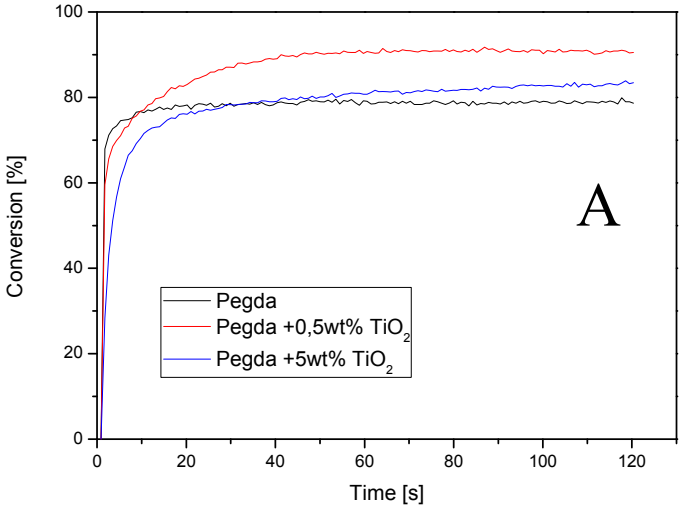


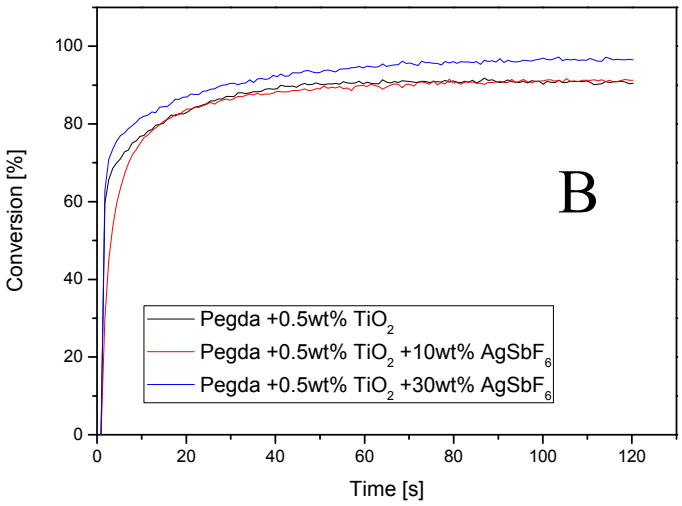

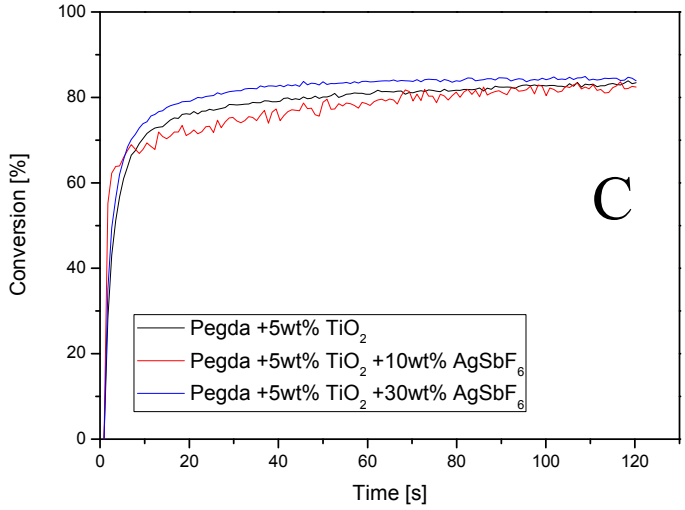


**Figure ESI1** Conversion curves for samples: panel a),comparison between the neat formulation and the formulations containing different amount of P25 ; panel b) comparison between formulation containin 0,5wt% of P25 and formulations containing 0,5wt% of P25 with different amount of $AgSbF_6$, ; panel c), comparison between formulation containin 5wt% of P25 and formulations containing 5wt% of P25 with different amount of $AgSbF_6$.

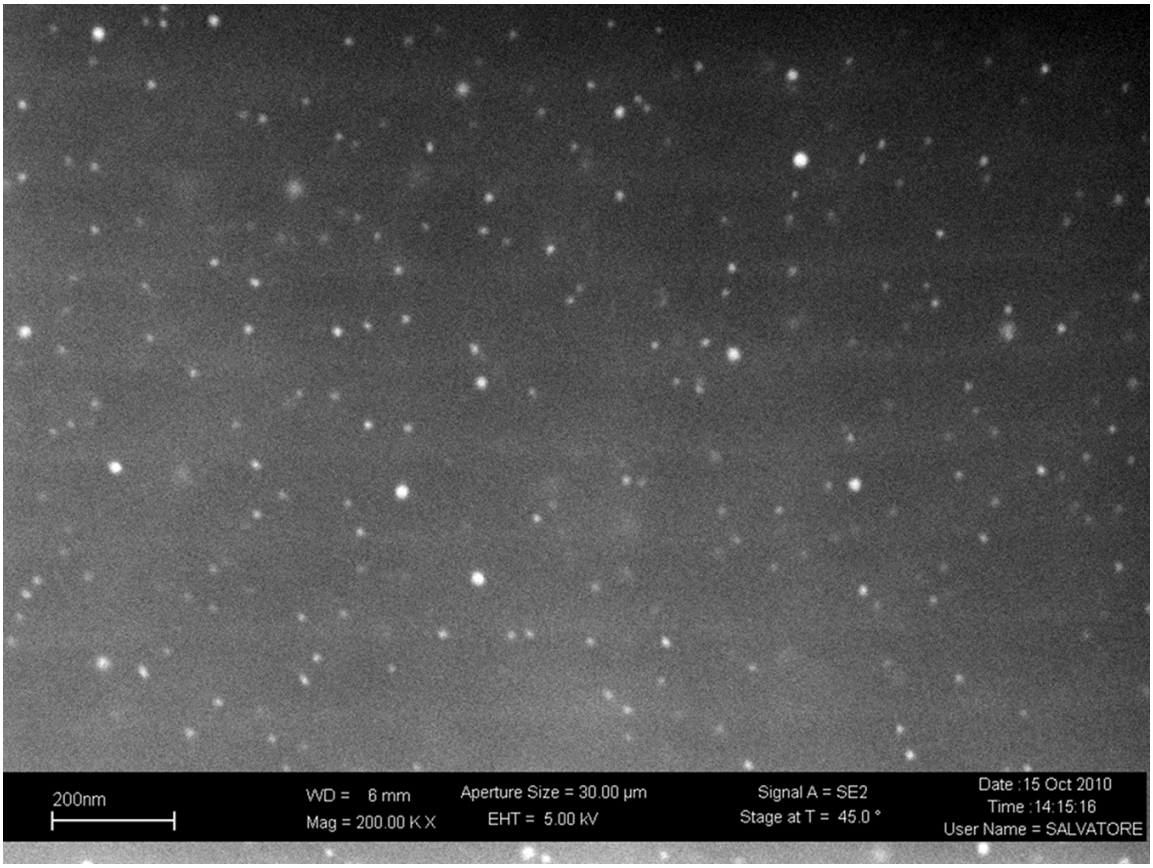


**Figure ESI2**. FESEM section of a UV cured sample containing 5wt% $AgSbF_6$.

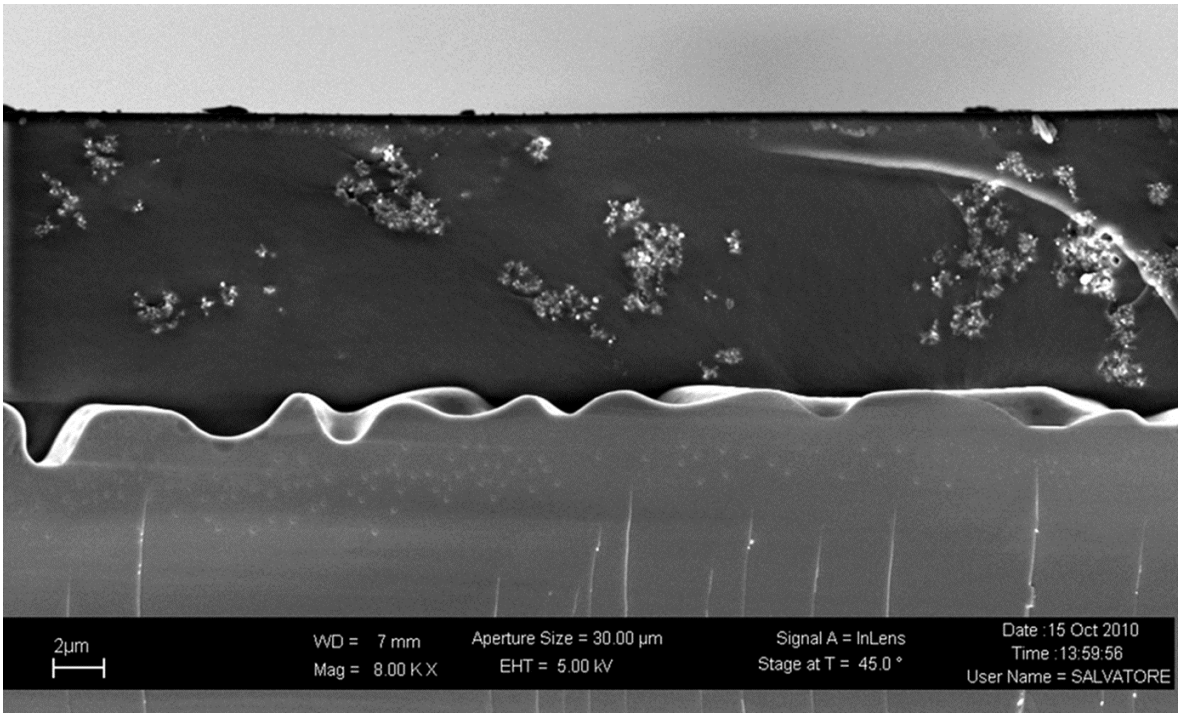


**Figure ESI3**. FESEM section of a UV cured sample containing 5wt% $TiO_2$ and 10wt% $AgSbF_6$, showing a total thickness around 10 µm. It is possible to see clusters of aggregates of NPs crossing the film section and forming percolative networks.

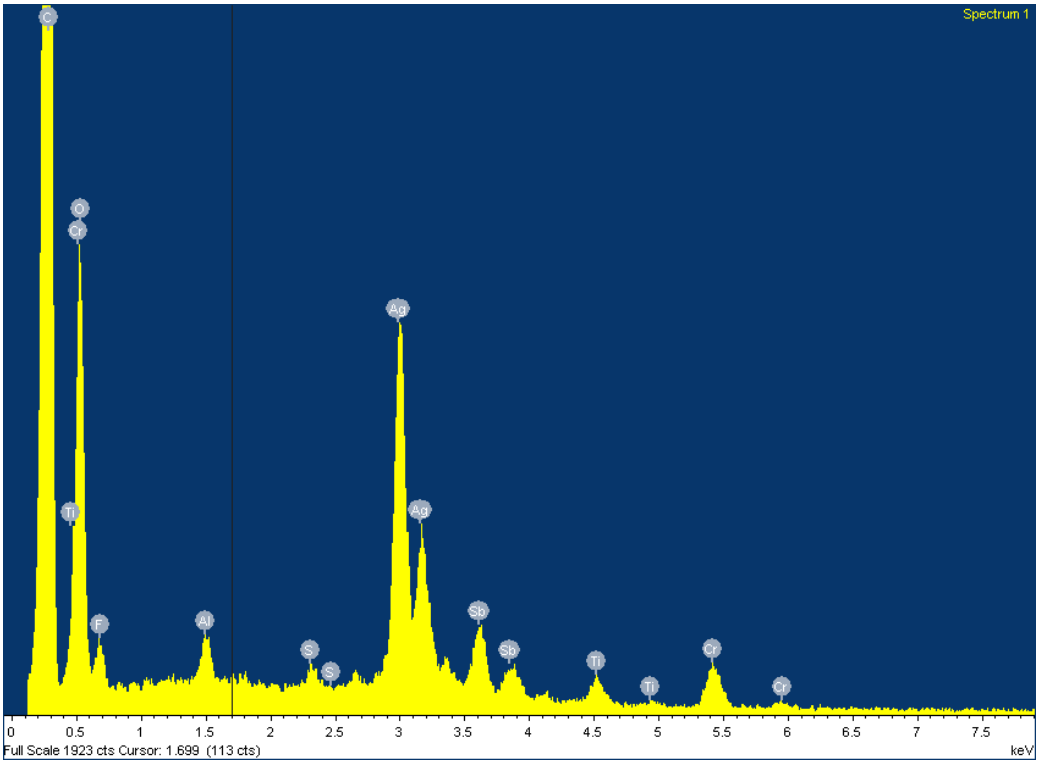


**Figure ESI4.**EDX spectrum of sample $AgSbF_6$ 10wt% and $TiO_2$ 1wt%.

**Table ESI1.** Composition of sample $AgSbF_6$ 10wt% and $TiO_2$ 1wt%, ad determined by EDX quantitative analysis.

| Reference line | Apparent Concentration [A.U.] | Intensity Correction [A.U.] | Weight % | Standard Deviation Weight % | Atomic % |
|---|---|---|---|---|---|
| C-K | 168.48 | 1.2514 | 49.41 | 0.56 | 64.72 |
| O-K | 37.27 | 0.4570 | 29.93 | 0.61 | 29.43 |
| F-K | 1.55 | 0.1698 | 3.34 | 0.48 | 2.77 |
| Al-K | 0.99 | 0.7994 | 0.45 | 0.04 | 0.26 |
| S-K | 0.58 | 0.9703 | 0.22 | 0.04 | 0.11 |
| Ti-K | 1.39 | 0.7934 | 0.64 | 0.06 | 0.21 |
| Cr-K | 3.03 | 0.8016 | 1.39 | 0.08 | 0.42 |
| Ag-K | 26.16 | 0.8429 | 11.39 | 0.24 | 1.66 |
| Sb-K | 6.58 | 0.7482 | 3.23 | 0.15 | 0.42 |