High Bandgap ACIGS based solar cells with Post-Deposition RbF layer

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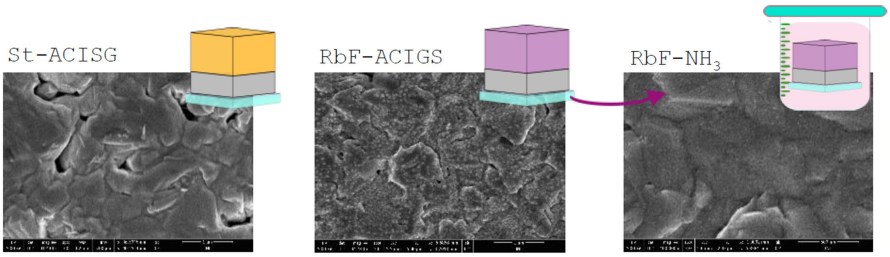
Nanotechnologies

Motivation

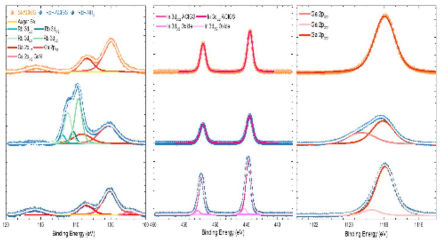
The addition of Ag in CIGS solar cells, have gaining some interest, due to the lower melting point of the ACISG. The PDT treatment is well known strategy to improve the CIGS. So what happen when it is combine both strategies?

ACIGS SEM top view analysis

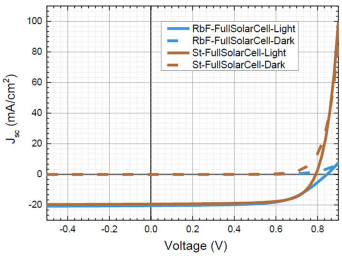


It is visible some by-products, due to the RbF, although it does not resist to the NH_3 bath

XPS Surface



Electrical Measurements



Conclusions

In terms of the structural properties, both samples have similar grain size, and it is visible some small by-products spheres, due to the RbF. In terms of optoelectronic properties, it occurs an improvement of the Voc value, and consequently, the efficiency.

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