

Conductor films based on AgNWs spin-coated on glass substrates

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Silver nanowires offer the potential to make transparent coating with high electrical conductivity. In this study AgNWs formulations have been used in high volume spin deposition processes to create transparent conductor films with the following properties target:

Sheet resistance of 50Ω /sq and light transmission of >90%

The work has been focused on:

- Modify NWs concentration by diluting IPA-NWs dispersions, both in water and IPA
- Study the Ultrasounds effect in the NWs properties (electrical,optical...)
- Substrates treatment (wet and plasma etching) to improve the adhesion.
- Number of layers deposited on glass substrate

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References

- [1] Matthew Large, et al., Scientific Reports, Predicting the optoelectronic properties of nanowire films based on control of length polydispersity Issue (2016)

Figures



Ag/IPA:IPA	Layers	Substrate	Resistance	T%	Image
1:1	2	Soda Lime	50-70 Ω	74,72	
1:2	2	Soda Lime	66-70Ω	79,97	

Figure 1: Comparative values between two different AgNw dispersions.

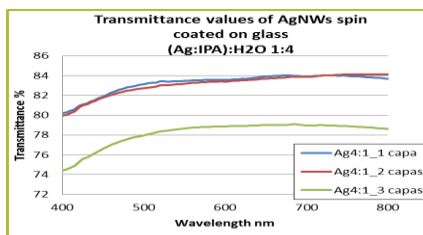


Figure 2: An example of transmission values of a concrete AgNw dispersion