Nano4Energy’s devotion to development of plasma technology has led to significant improvements of coating properties as well as productivity in every day manufacturing. Due to the development of power supplies we have the possibility to tailor the whole process to optimize every parameter. The knowledge has been implemented in several industrial systems that are in the market today.

**HiPIMS HiPlus technology & DLC on glass**

The HiPIMS HiPlus function is a great example that have led to improvements in both properties and deposition rates; boosting the HiPIMS technology in industrial applications. Exceptional adhesion and smoothness with deposition at low temperature on both conducting and insulating substrates.

Nano4Energy have used the HiPIMS HiPlus technology to develop a new series of high performing sputtered DLC coatings, thanks to the HiPlus technology it is ideal for insulating substrates such as plastics and glass.

**Implementation of state of the art coatings in industrial coating systems**

We work closely with our customers in order to implement the latest technology of thin film coatings to every day production. We are part of the process from idea, coating development, system design and full implementation for fully automatic high volume production.
Denser films with no evidence of composition changes when performing multiples passes. By adding a positive voltage overshoot all positive ions will be pushed in front of the target to move towards the substrate with an energy comparable to the positive target voltage. This allows us to “bias” insulating substrates and to increase the deposition rate or create considerably denser films maintaining the stoichiometry.

State of the art HiPIMS technology with HiPlus \( V^+ \):
Deposition of TiO\(_2\) on roll to roll polymer web

Denser films with no evidence of composition changes when performing multiples passes. By adding a positive voltage overshoot all positive ions will be pushed in front of the target to move towards the substrate with an energy comparable to the positive target voltage. This allows us to “bias” insulating substrates and to increase the deposition rate or create considerably denser films maintaining the stoichiometry.

**TiO\(_2\) coatings deposited at equal average power and time.**

- Pulsed DC
- HiPIMS HiPlus \( V^+ \) 200A, +350V
- HiPIMS HiPlus \( V^+ \) 400A, +400V

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The industrial HiPIMS choice!
The power of reliability!

HiPIMS-PS
DC-PS
HiPIMS Synchronized Bias / DC-Bias
HiPIMS AC Dual magnetron
HiPlus Voltage reversal technology

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