

Supplementary data: Localized Atmospheric Plasma Sintering of Inkjet Printed Silver Nanoparticles

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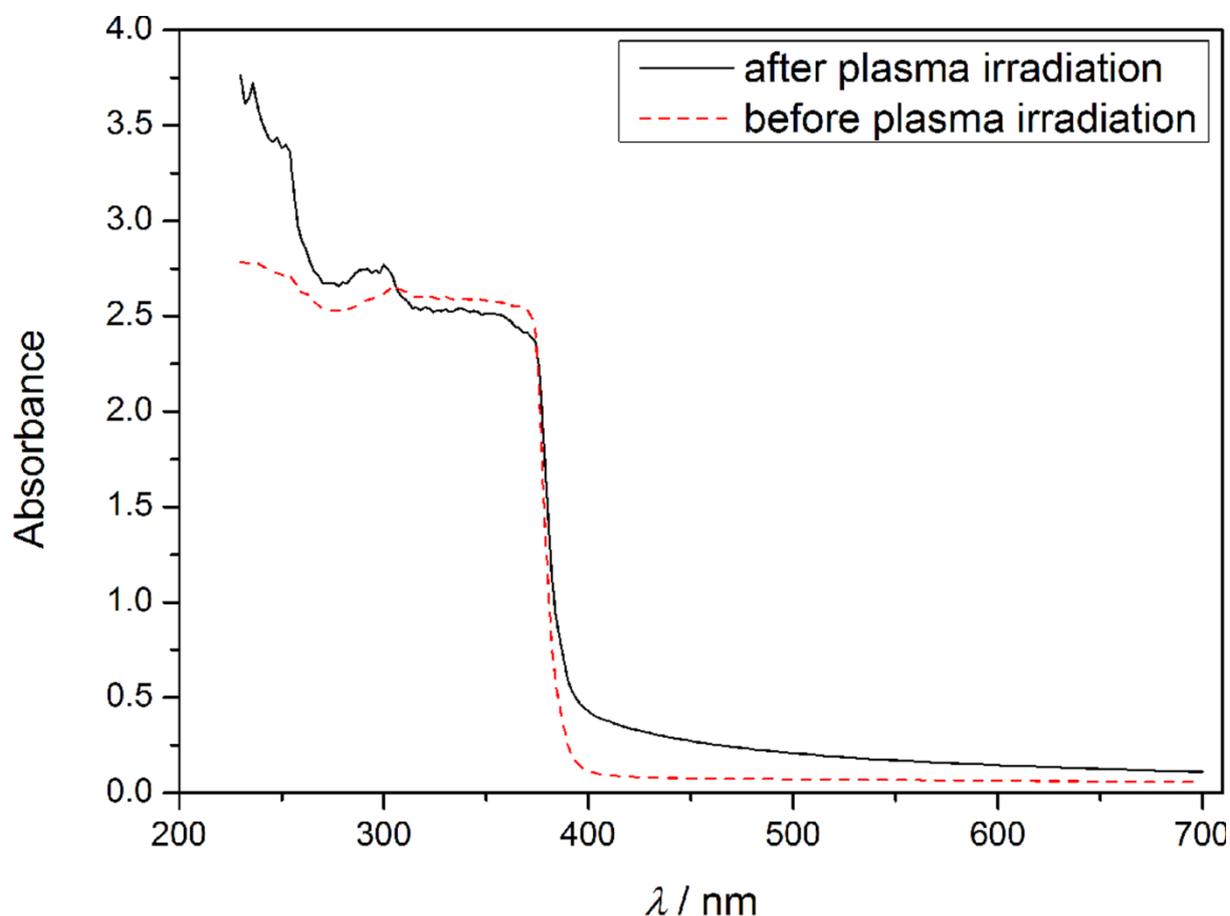
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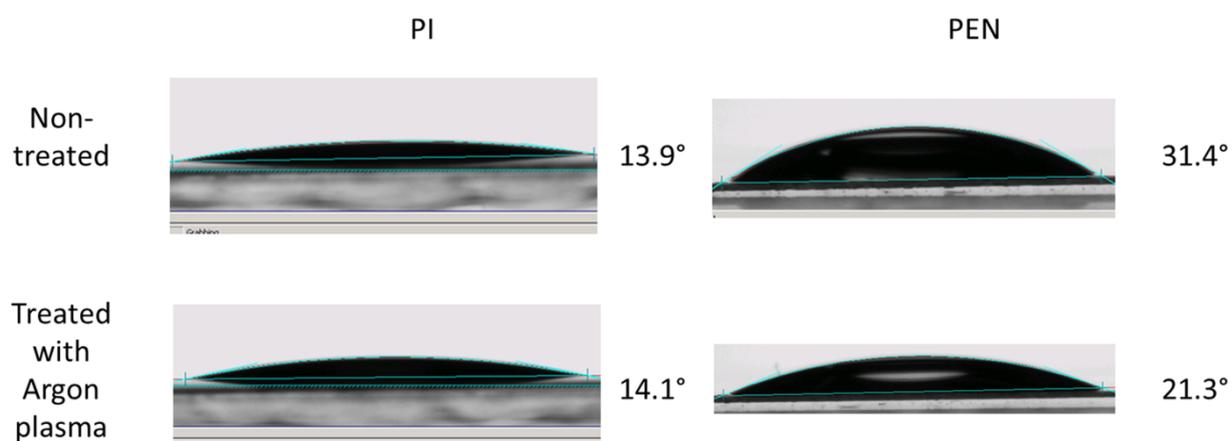
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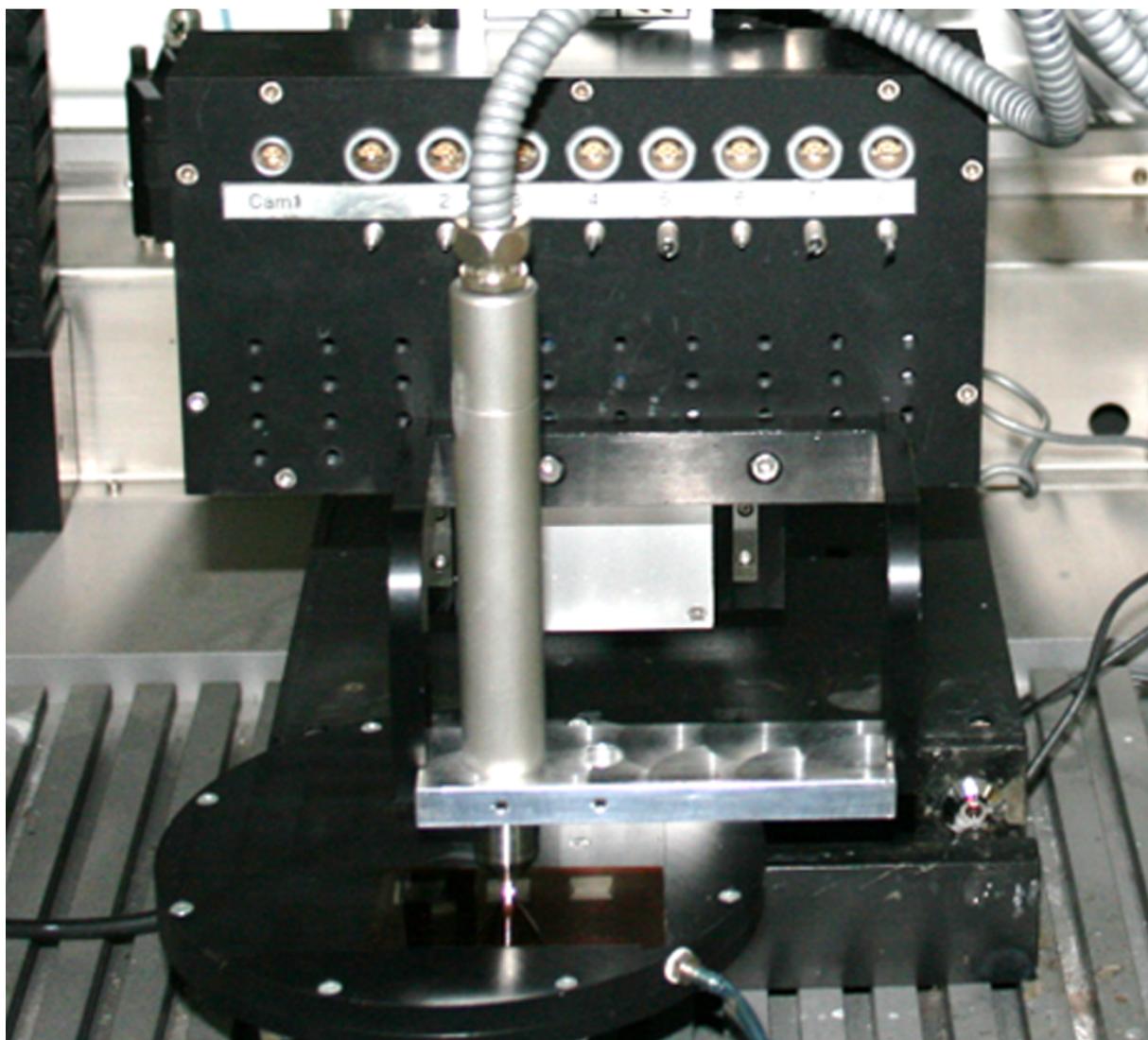


Supporting Information Figure 1. UV-Vis spectra of a polyethylene naphthalate (PEN) foil before and after 120 min of low pressure argon plasma treatment.

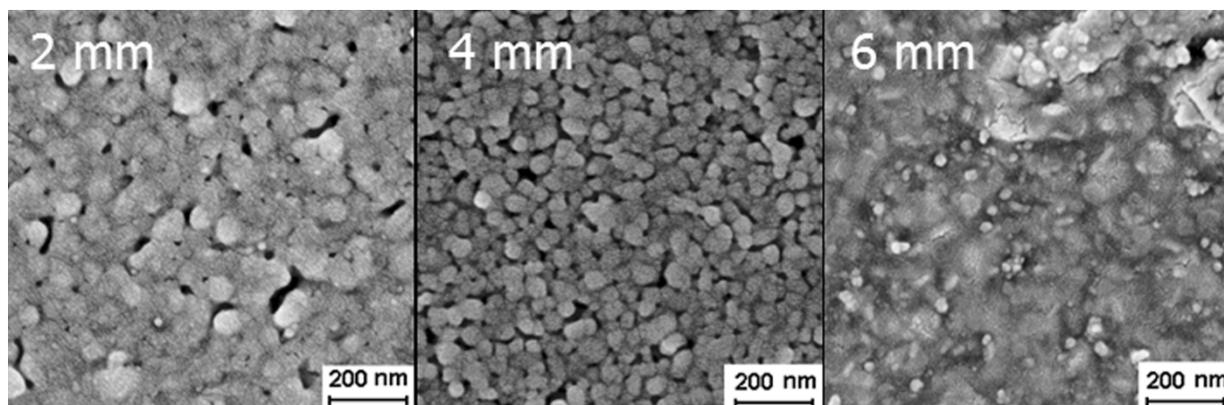
Low pressure argon plasma treatment of PEN foil results in higher absorbance values below wavelengths of 300 nm. This increase in absorbance is due to the decomposition of the polymer foil on the surface, accompanied by a color change to yellow as well as opaqueness of the treated foil.



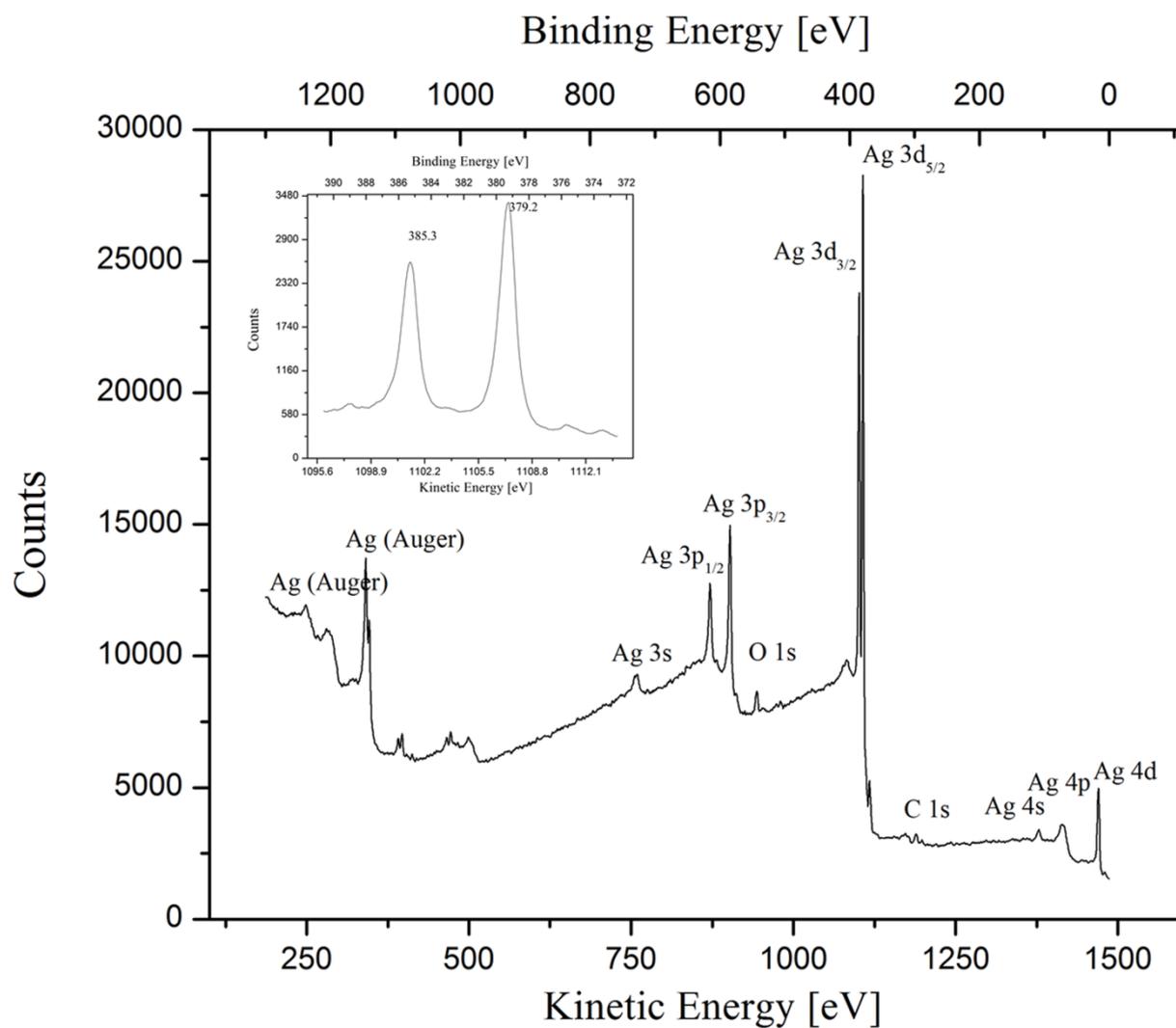
Supporting Information Figure 2. Water contact angle measurement of non-treated (**top**) and atmospheric pressure argon plasma treated (**bottom**) polyimide (PI) (**left**) and polyethylene naphthalate (PEN) foils (**right**).



Supporting Information Figure 3. Plasma pencil attached to the stage control system of the inkjet printer (microdrop Technologies GmbH) using a customized holder.



Supporting Information Figure 4. Scanning electron microscopy (SEM) images of samples sintered for 75 s at a height of 2 mm (**left**), 4 mm (**center**) and 6 mm (**right**) .



Supporting Information Figure 5. X-ray photoelectron spectroscopy (XPS) of printed Cabot CCI-300 rectangle (5×10 mm) after plasma sintering at atmospheric pressure (1 min).