

# Response letter for Manuscript #25

First of all, the authors would like to thank the referees and the editors for their approving review and their helpful suggestions of how to improve the manuscript.

## **Reply to the comments of the Reviewer**

***"As soon as the plasma is switched off, the work function degrades with a rate of about +0.4 eV/h."***

***It is not clear whether the work function has increased or decreased in this sentence. The quality of the work function varies with the object. Normally, degradation of the work function means decreasing of the work function.***

Thank you for pointing this out. The verb "degrades" has now been replaced with "increases".

***"Without active heating, this effect is reversed"***

***This sentence should be stated specifically. If it is reversed, does the work function continue to fall? Or, does a lower limit of the work function appear?***

Short plasma pulses lead to a work function of 3.2 eV. It was observed that the active heating of the sample during plasma leads to an increase of the work function. By switching off the active heating during plasma, the work function decreases again to 3.2 eV, and no lower limit was reached. This has now been clarified in the manuscript.

***"Without the application of an external bias potential, ... thus neglected in this consideration)."***

***This sentence is confusing; I recommend that it should be written by two sentences.***

Thank you for the suggestion, it has been implemented.

***The word "/" between the title of the axis and the unit will be misleading. The units should be styled like "(V)".***

The authors would like to keep the "/" between title and unit, which is according to the standard DIN 461.