

# PEM fuel cell electrode preparation using oxygen plasma treated graphene related material serving as catalyst support for platinum nanoparticles

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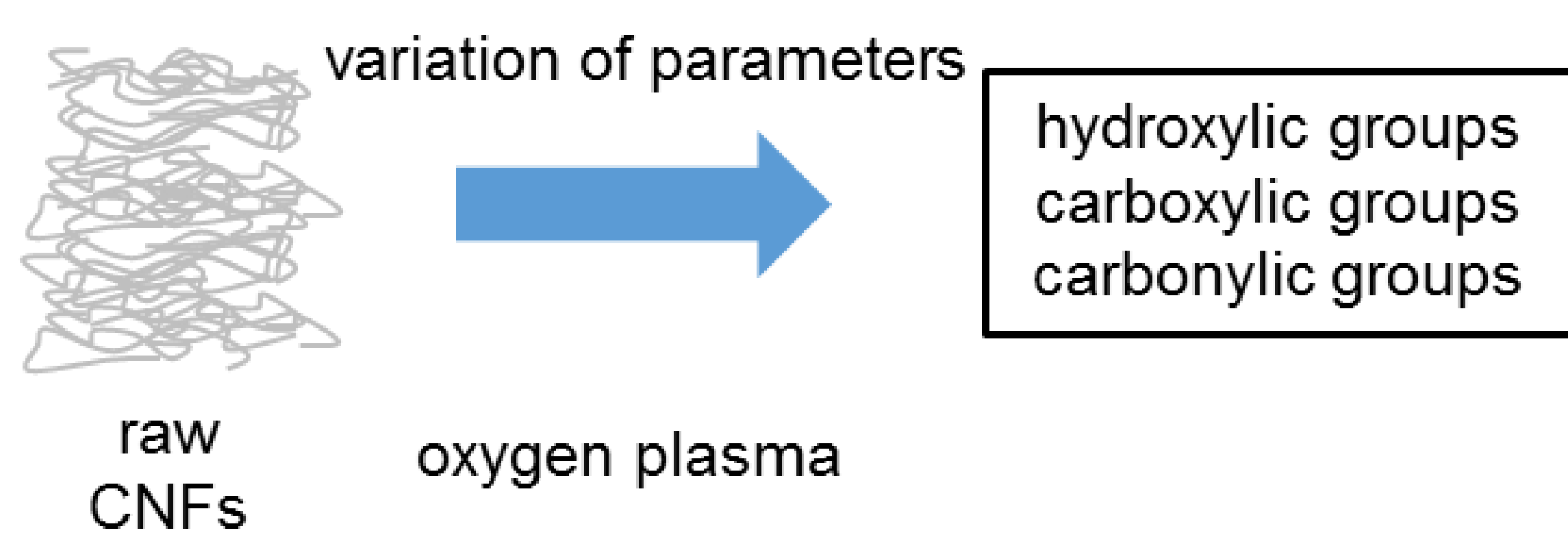
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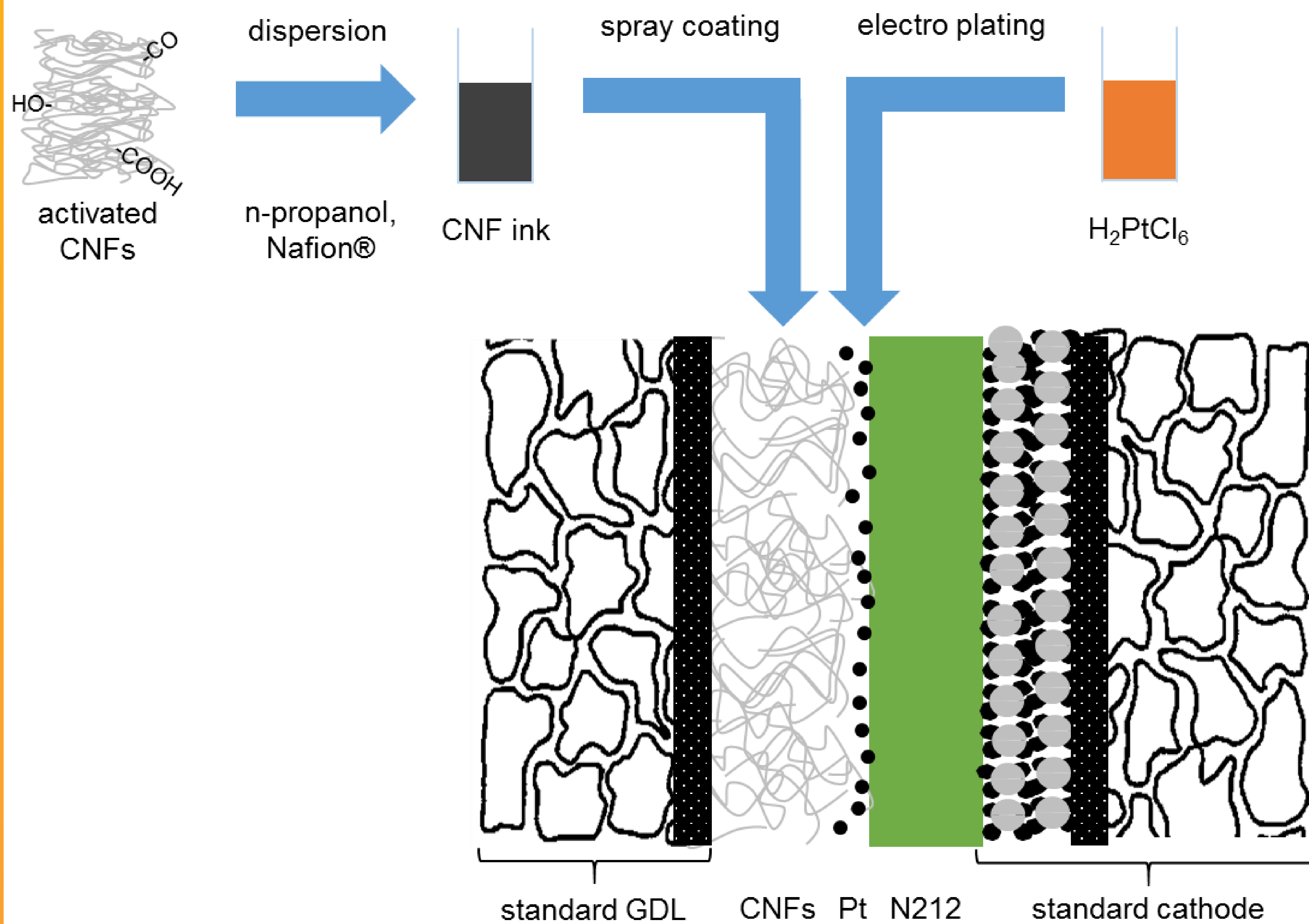
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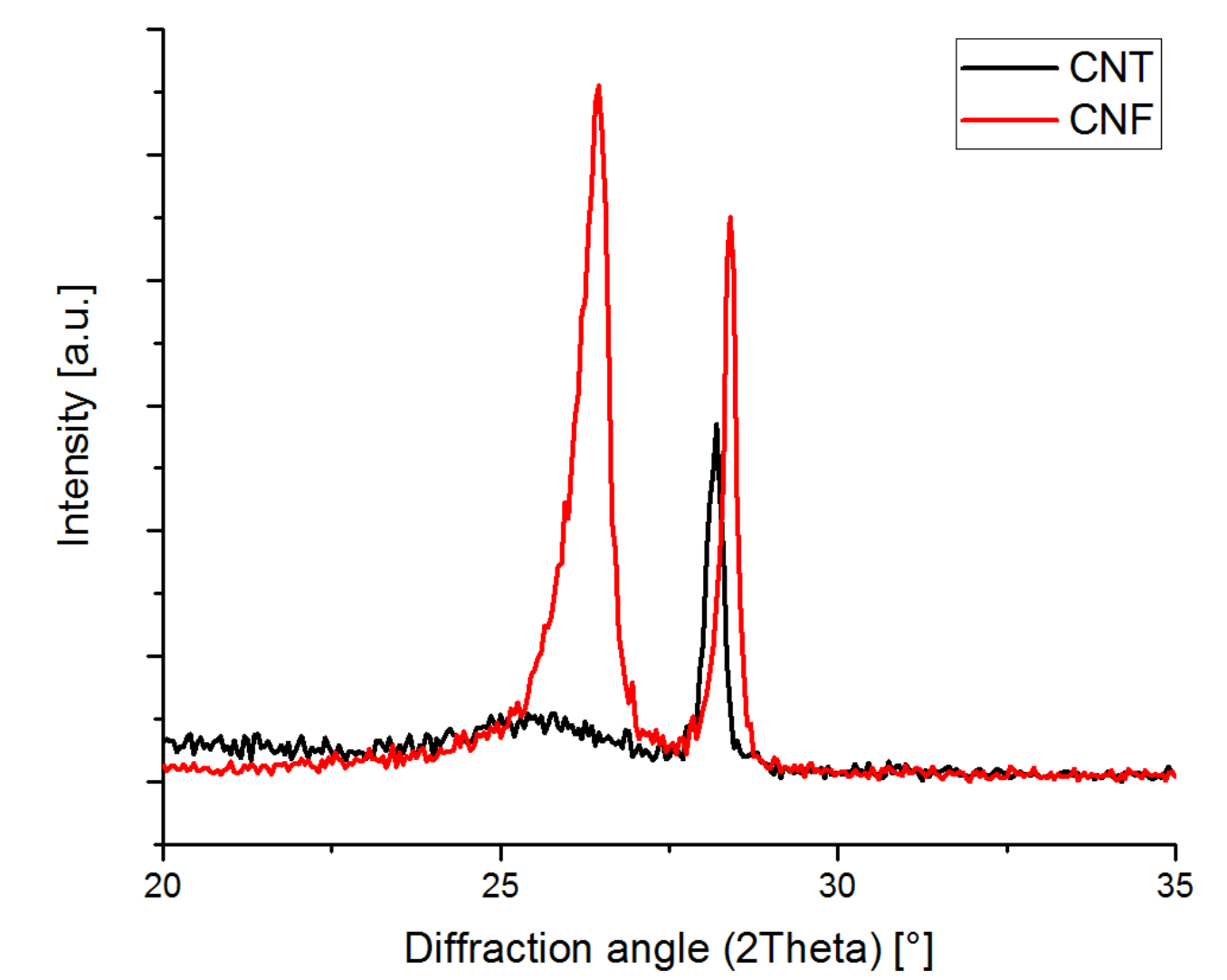
## CNF functionalisation



## MEA preparation

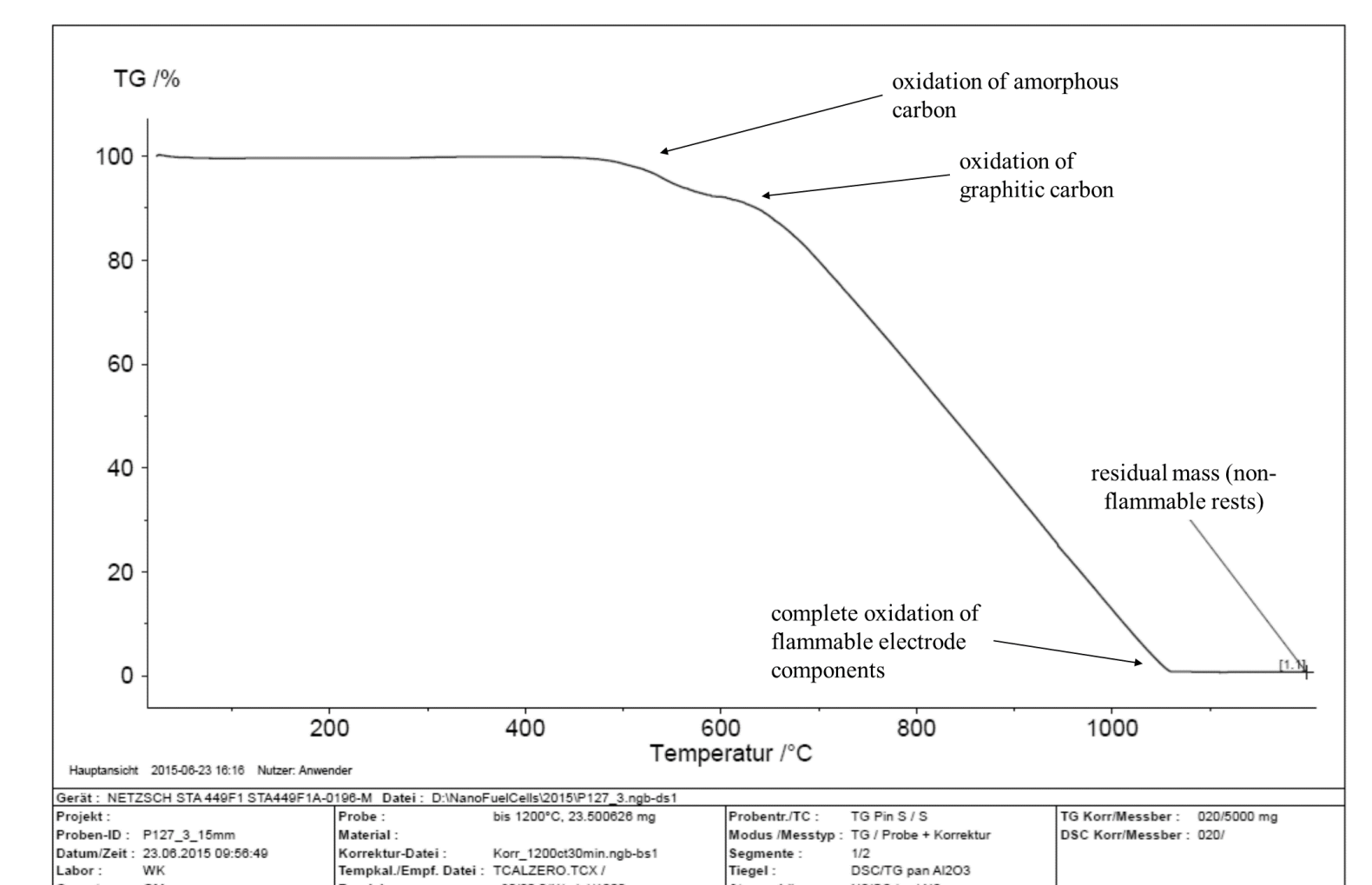


## XRD



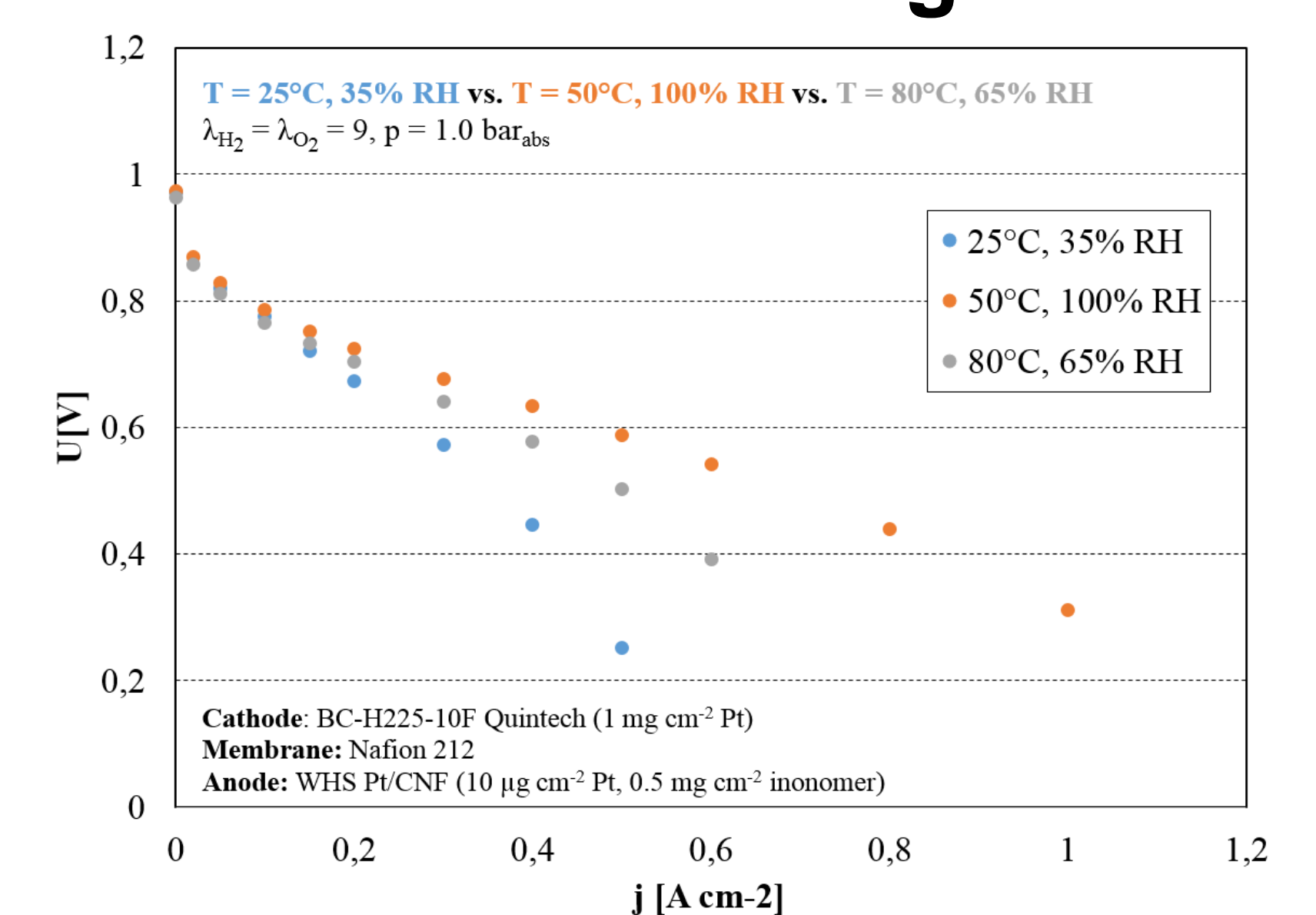
G<sub>p</sub> = 70%

## TGA



m<sub>Pt</sub> = 10 μg cm<sup>-2</sup>

## in-situ testing



P<sub>spec, 0.6V</sub> = 300 mW cm<sup>-2</sup>

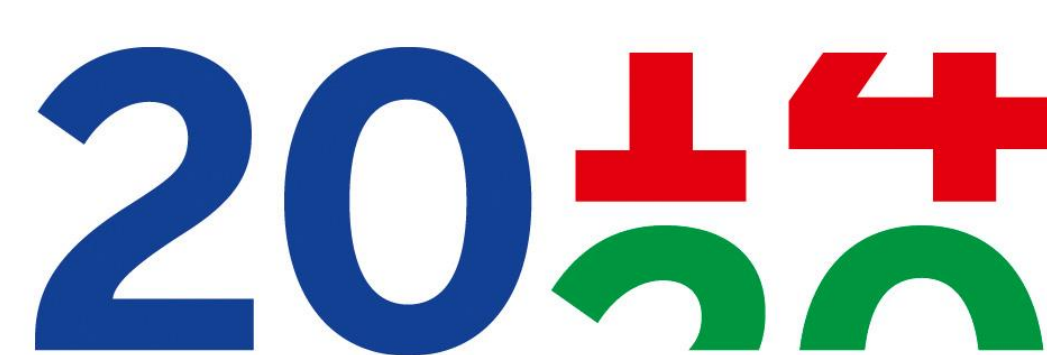
Smart preparation methods applied for this experimental work result in PEM fuel cell electrodes with very low platinum loading and high catalyst utilization.

## Acknowledgments

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