The chronoamperometric measurements were used to investigate the stability of the catalysts [8]. A loss of 50% of the initial current density was observed after 34 s in the Pd/C catalyst, while the Pd/TiO_2 lasted 56 s. The lower initial current density, less abrupt drop and higher stability current indicate a lower degradation rate for the Pd/TiO2 catalyst [9][10]. After 30 min operation, very slow decline was observed on both catalysts. This suggests that TiO_2 is a stable substitute to carbon as supports in DEFCs [5].

4. Conclusion

Commercial TiO_2 can be used as support for Pd, exhibiting performance similar to carbon support (Vulcan). However, the TiO_2 characteristics may vary [2] and this affects the electrocatalytic activity.

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