Supplementary Information (SI) for Journal of Materials Chemistry A.
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Mesoporous platinum coating on quartz fibres by soft-templated electroless deposition

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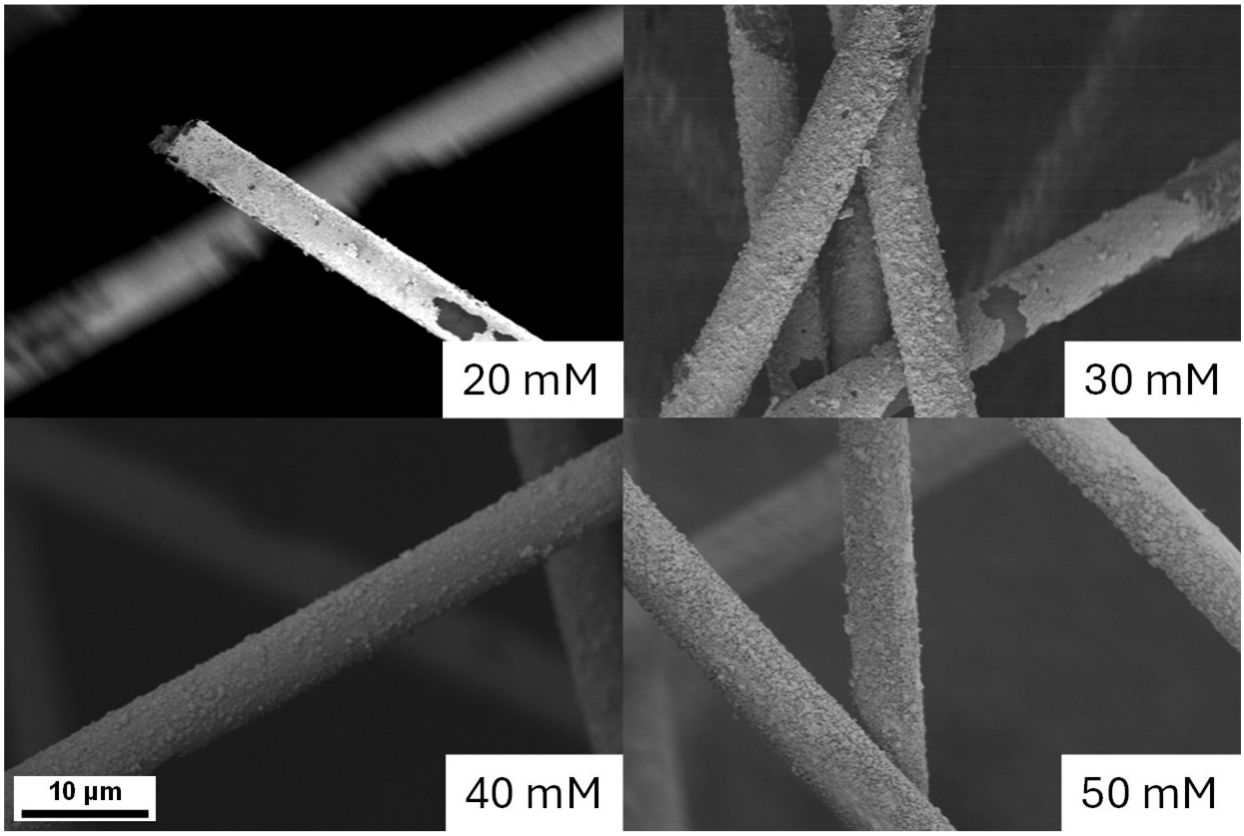

Fig. S1. SEM images of mPt@QF taken from the centre of the QF sample synthesized using starting Pt precursor concentrations of 20, 30, 40, and 50 mM.

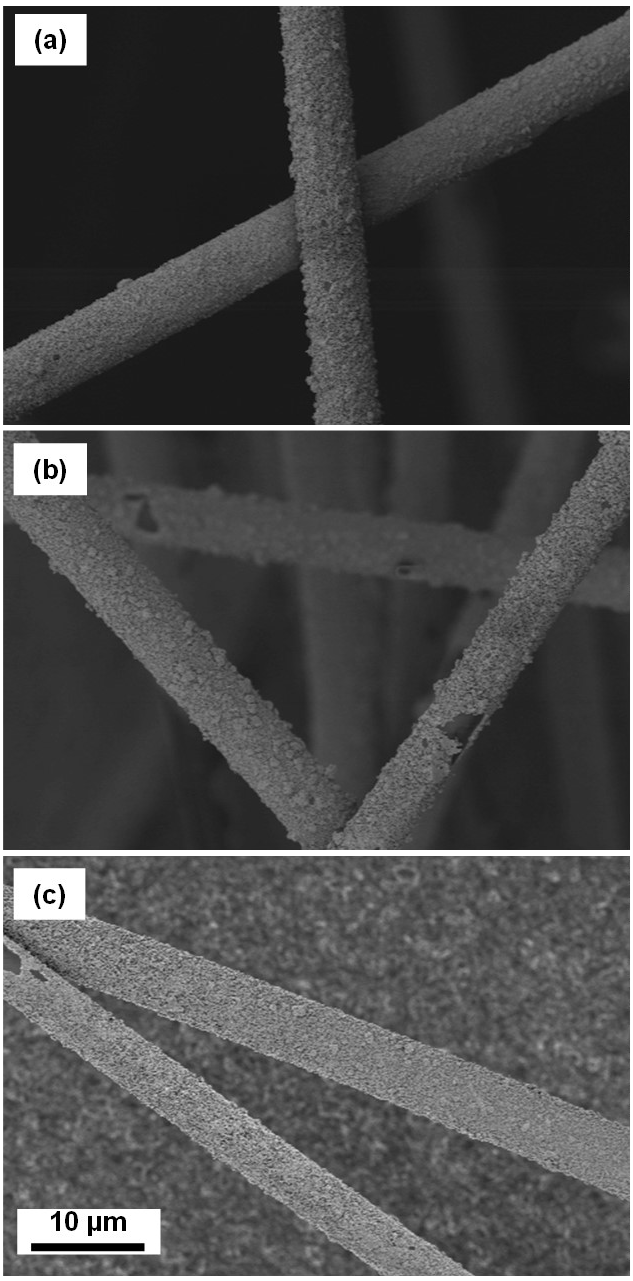

Fig. S2. SEM images of mPt@QF collected from two different locations within the same sample (a, b), and from a separate batch (c) under the same condition with Pt precursor concentrations of 40 mM.

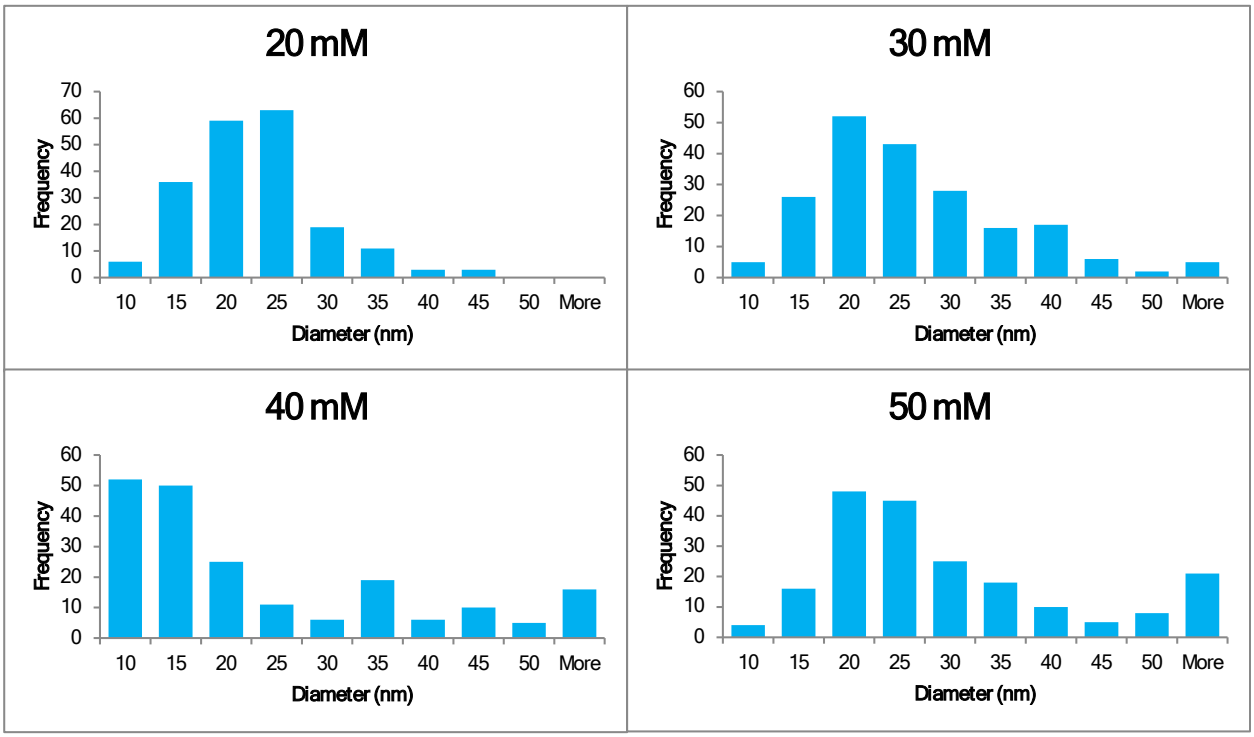

Fig. S3. Measured pore size distribution of as-prepared mPt@QF synthesized using starting Pt precursor concentrations of 20, 30, 40, and 50 mM.

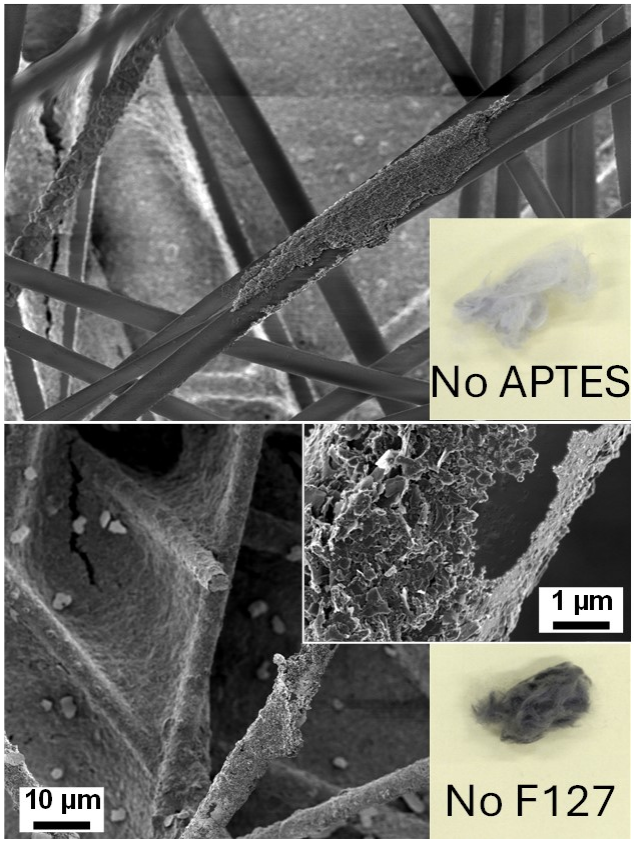

Fig. S4. SEM images of mPt@QF synthesized using starting Pt precursor concentrations of 40 mM in the absence of APTES or F127.

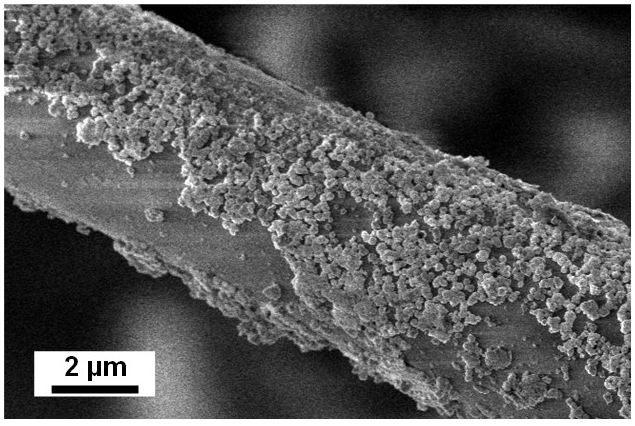

Fig. S5. SEM images of mPt@QF synthesized using 100 mg QF at starting Pt precursor concentrations of 20 mM.

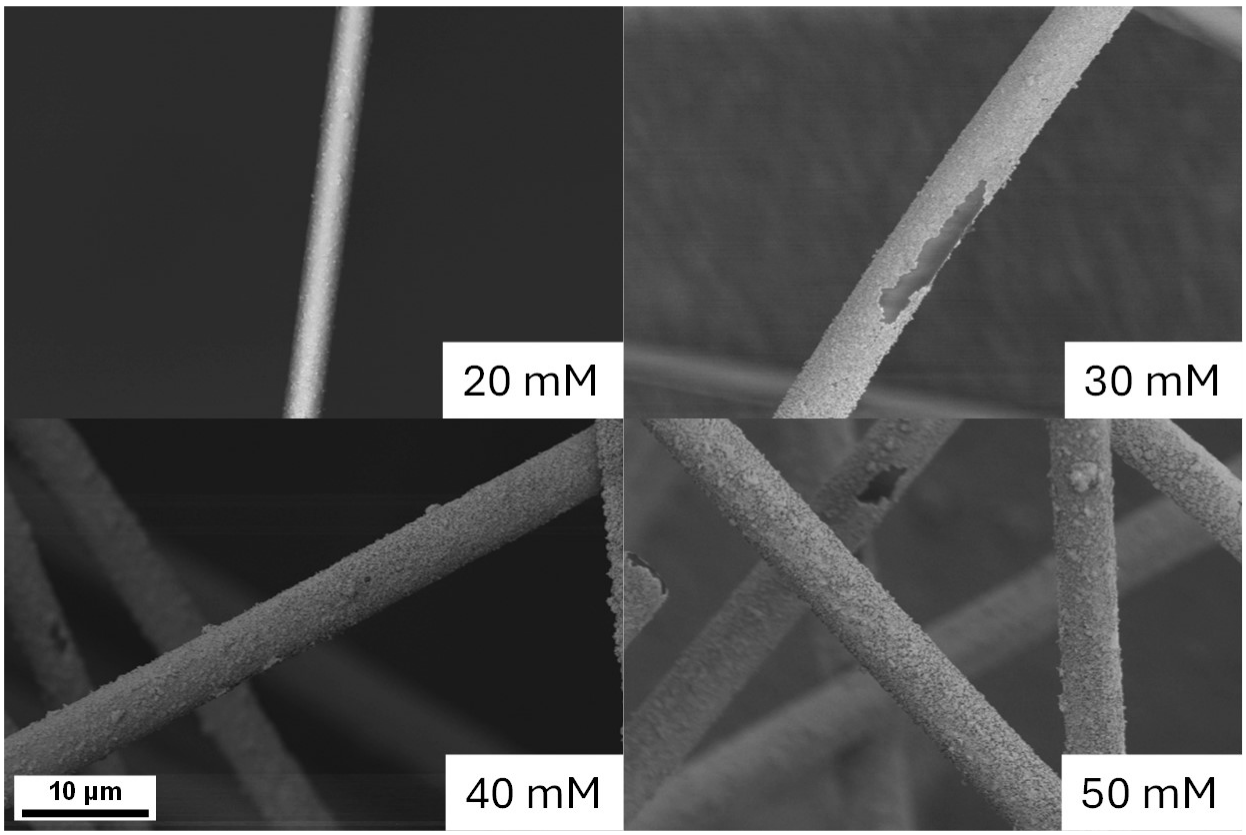

Fig. S6. SEM images of mPt@QF synthesized using starting Pt precursor concentrations of 20, 30, 40, and 50 mM after 100 °C treatment.

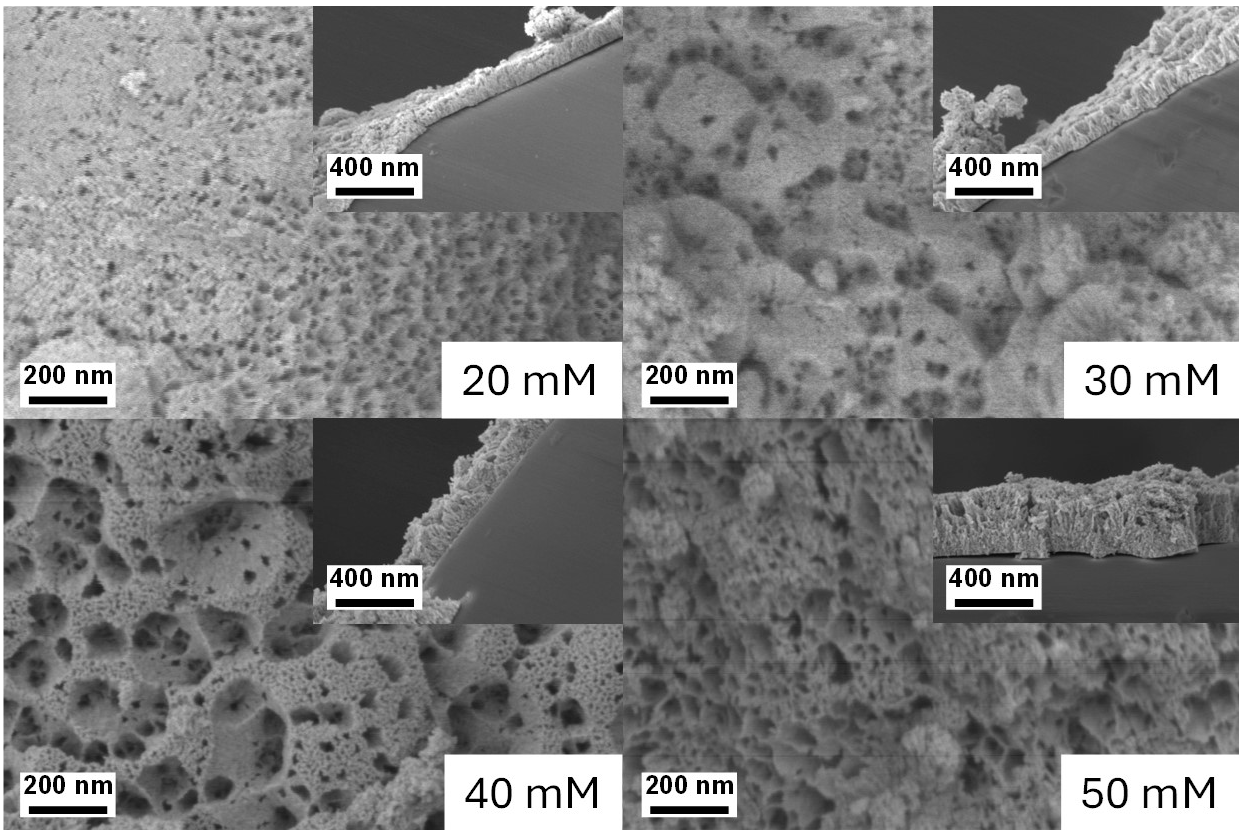

Fig. S7. High magnification SEM images of mPt@QF synthesized using starting Pt precursor concentrations of 20, 30, 40, and 50 mM after 100 °C treatment.

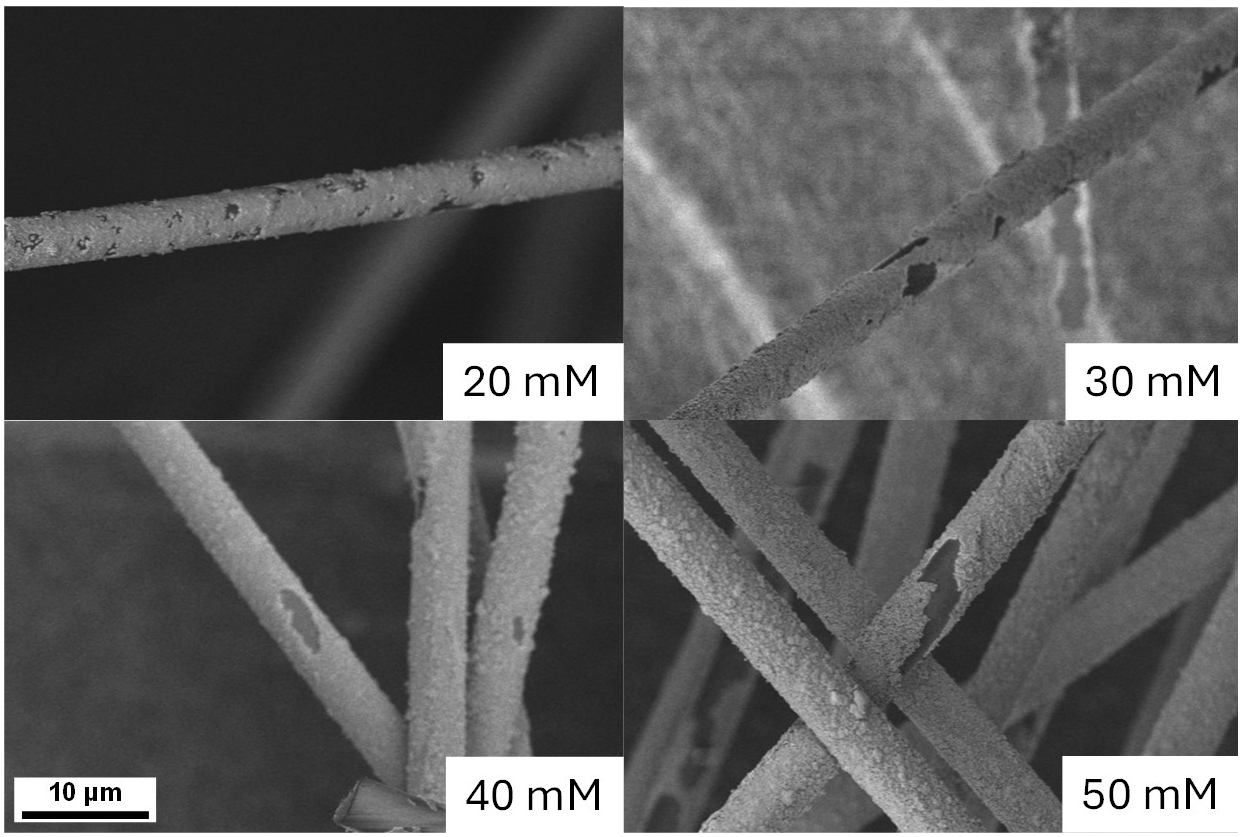

Fig. S8. SEM images of mPt@QF synthesized using starting Pt precursor concentrations of 20, 30, 40, and 50 mM after 200 °C treatment.

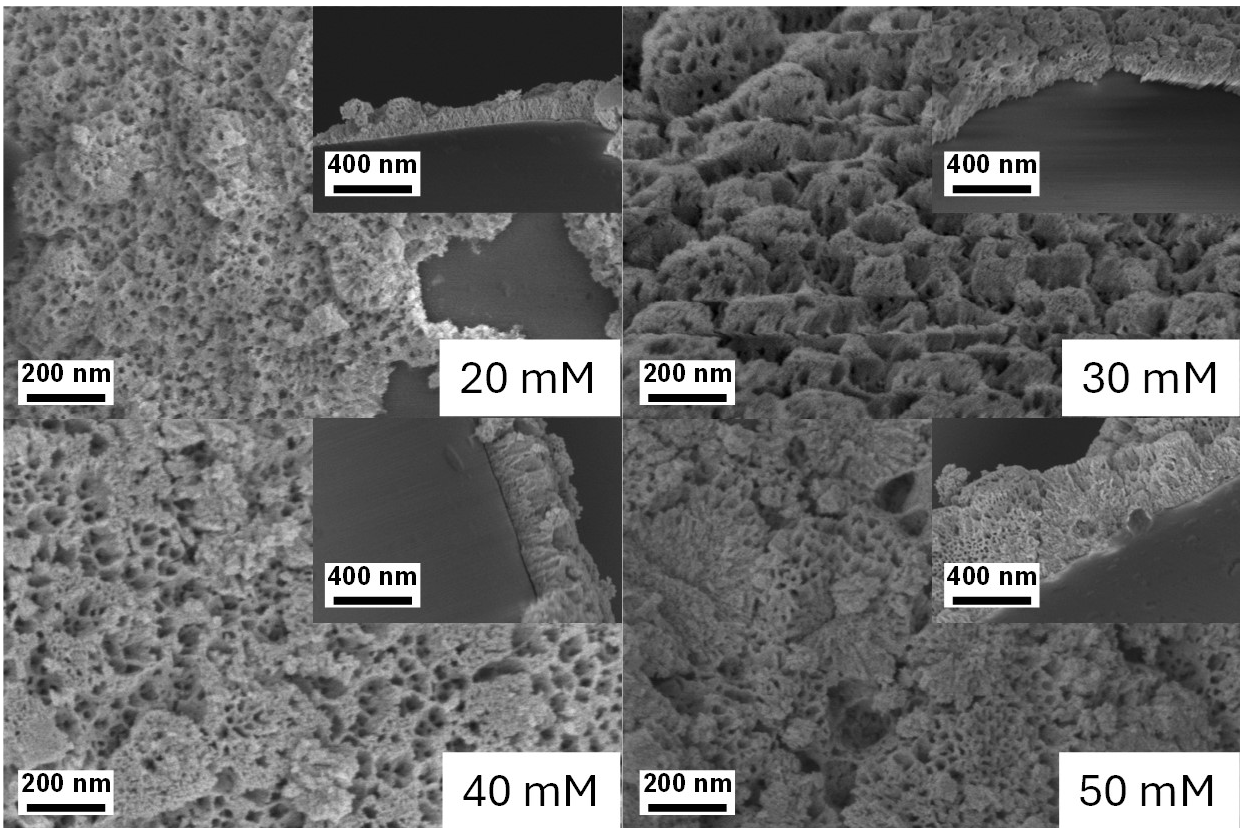

Fig. S9. High magnification SEM images of mPt@QF synthesized using starting Pt precursor concentrations of 20, 30, 40, and 50 mM after 200 °C treatment.

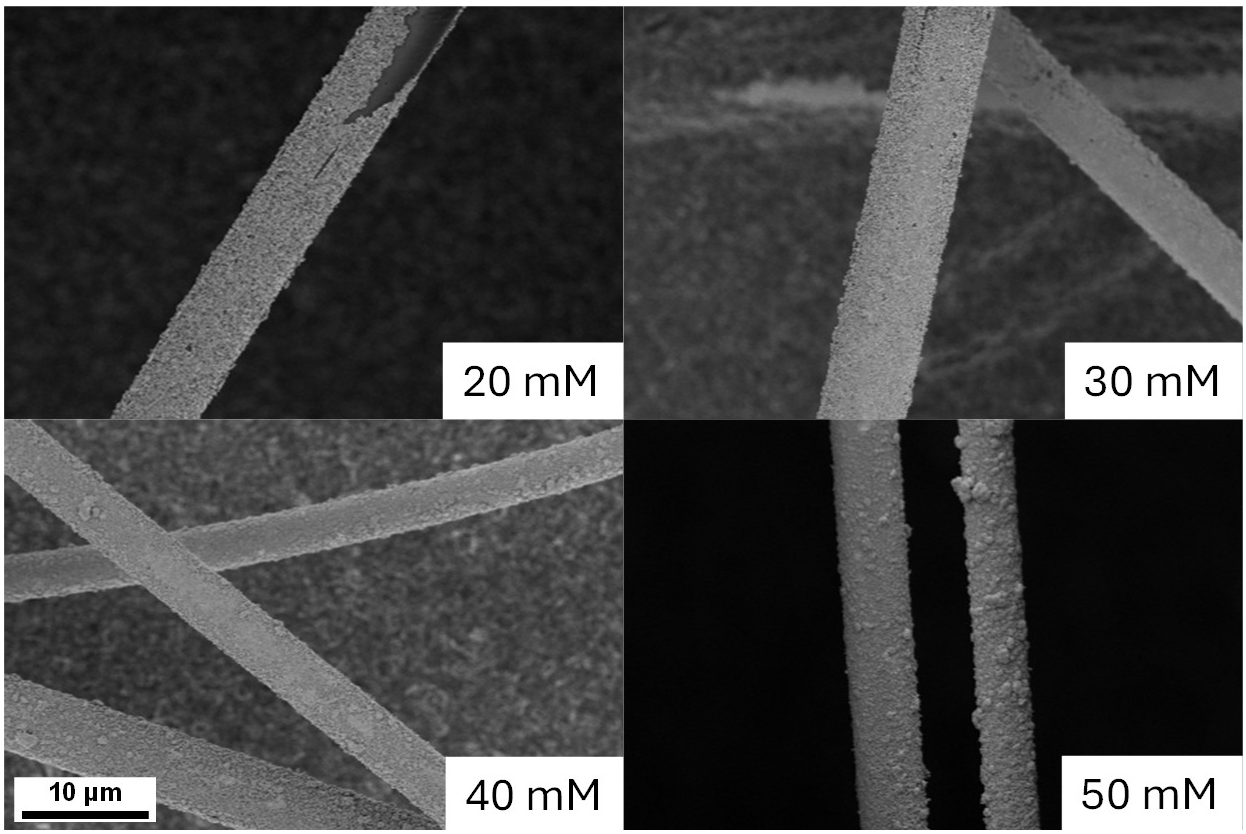

Fig. S10. SEM images of mPt@QF synthesized using starting Pt precursor concentrations of 20, 30, 40, and 50 mM after 350 °C treatment.

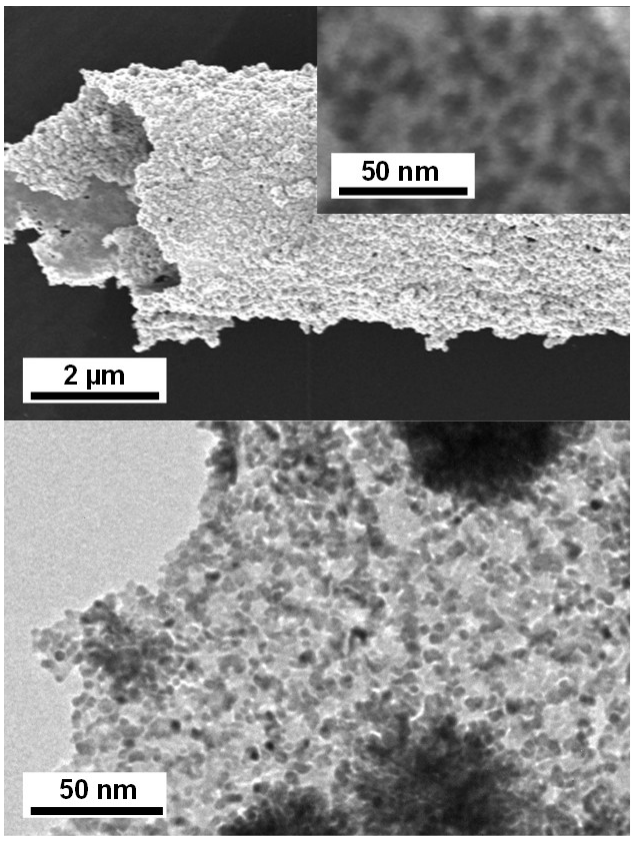

Fig. S11. SEM(top) and TEM (bottom) images of bimetallic mPtPd after removal of QF.

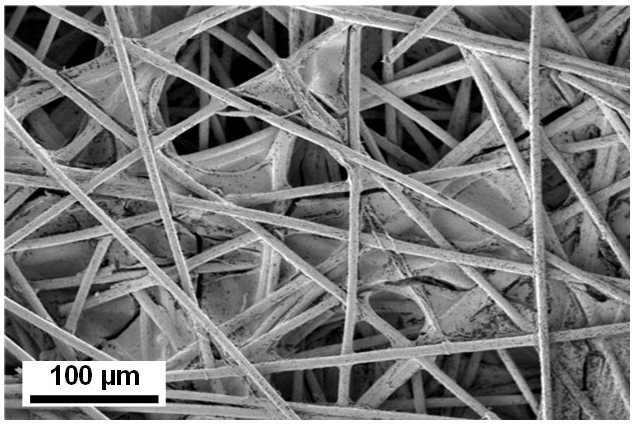

Fig. S12. SEM images of mPt@CP synthesized using starting Pt precursor concentrations of 40 mM.

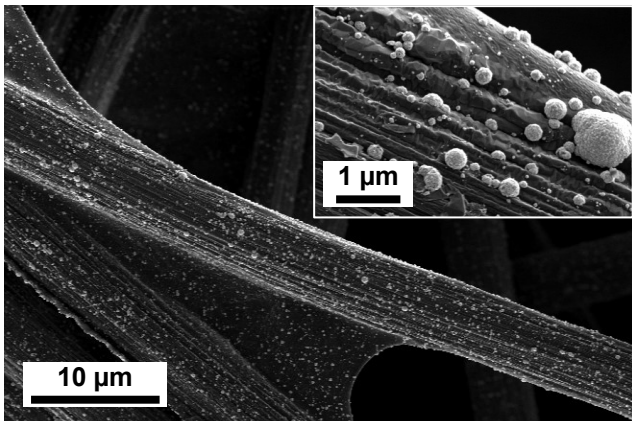

Fig. S13. SEM images of mPt@CP synthesized using starting Pt precursor concentrations of 40 mM in the absence of APTES modification. The bright spots are mPt nanoparticles.

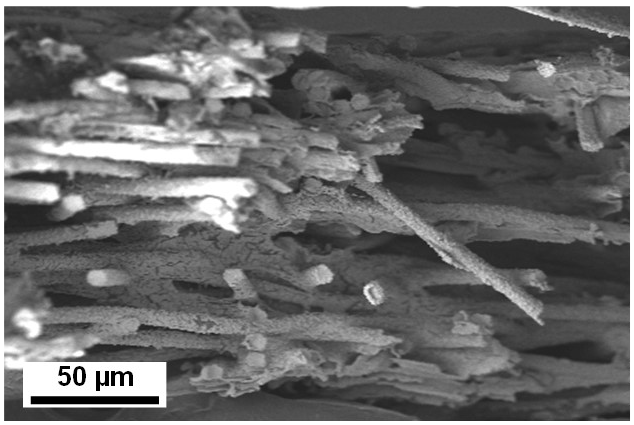

Fig. S14. SEM images of cross-section of mPt@CP.

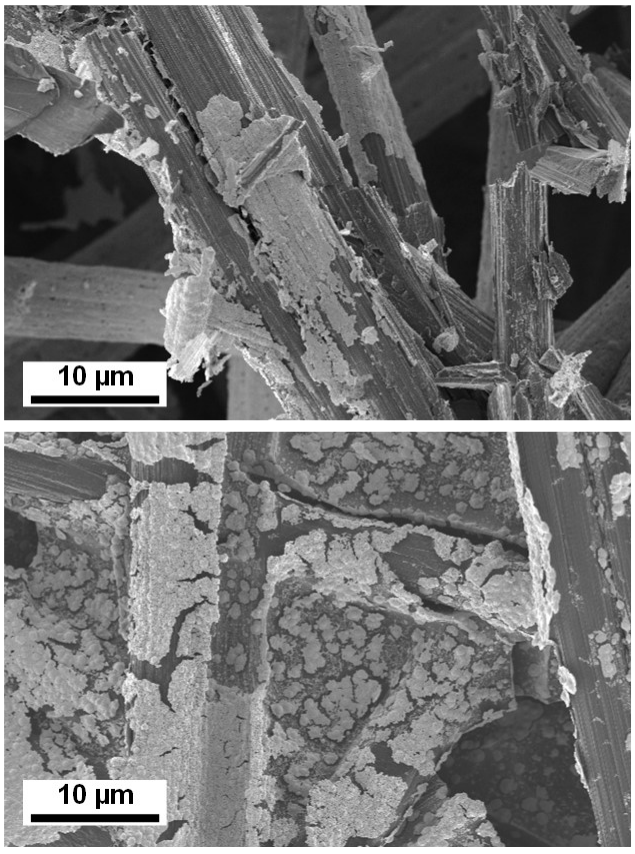

Fig. S15. SEM images of mPt@CP after heat treatment in air (top) and N_2 (bottom).