Supplementary Information (SI) for Nanoscale Advances.

Supplementary Material

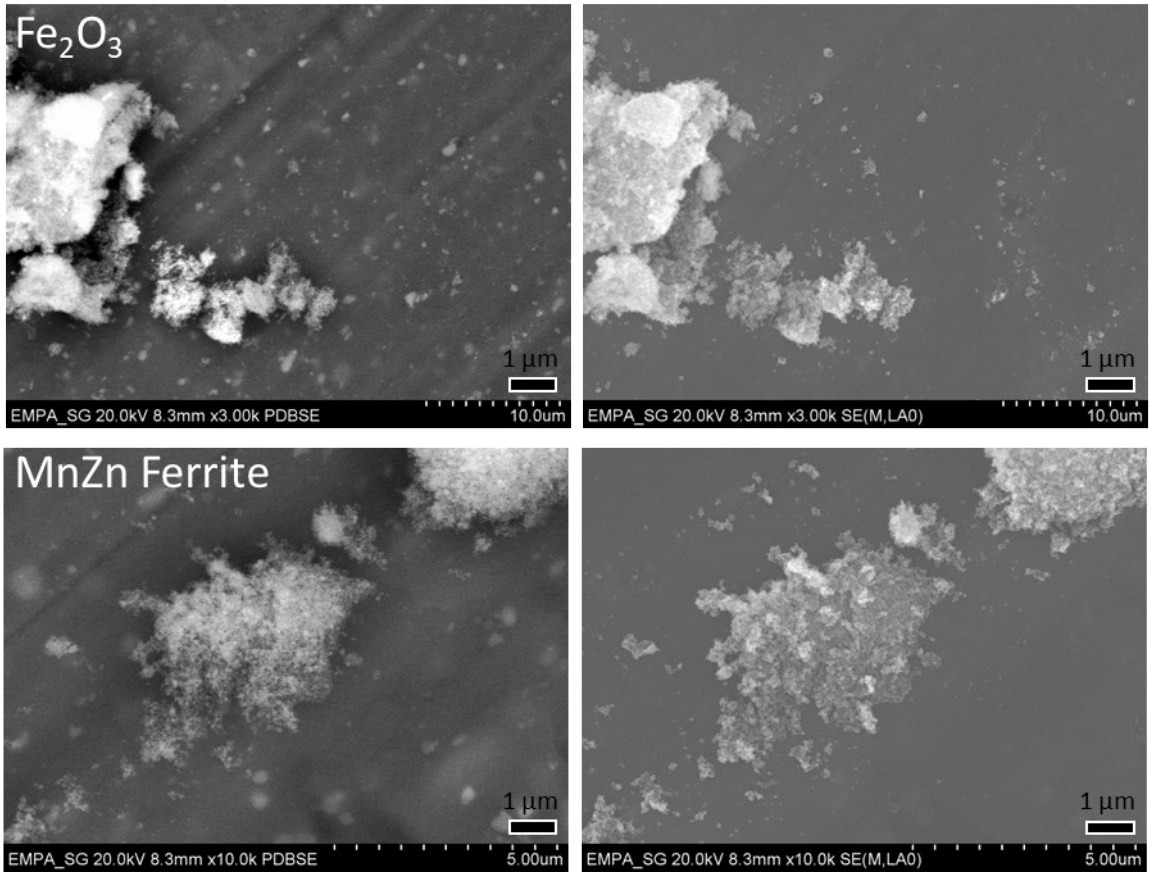

Figure S1 – Backscatter (left column) and secondary (right column) electron imaging of the Fe_2O_3 (top) and MnZn Ferrite (bottom) nanoparticles.

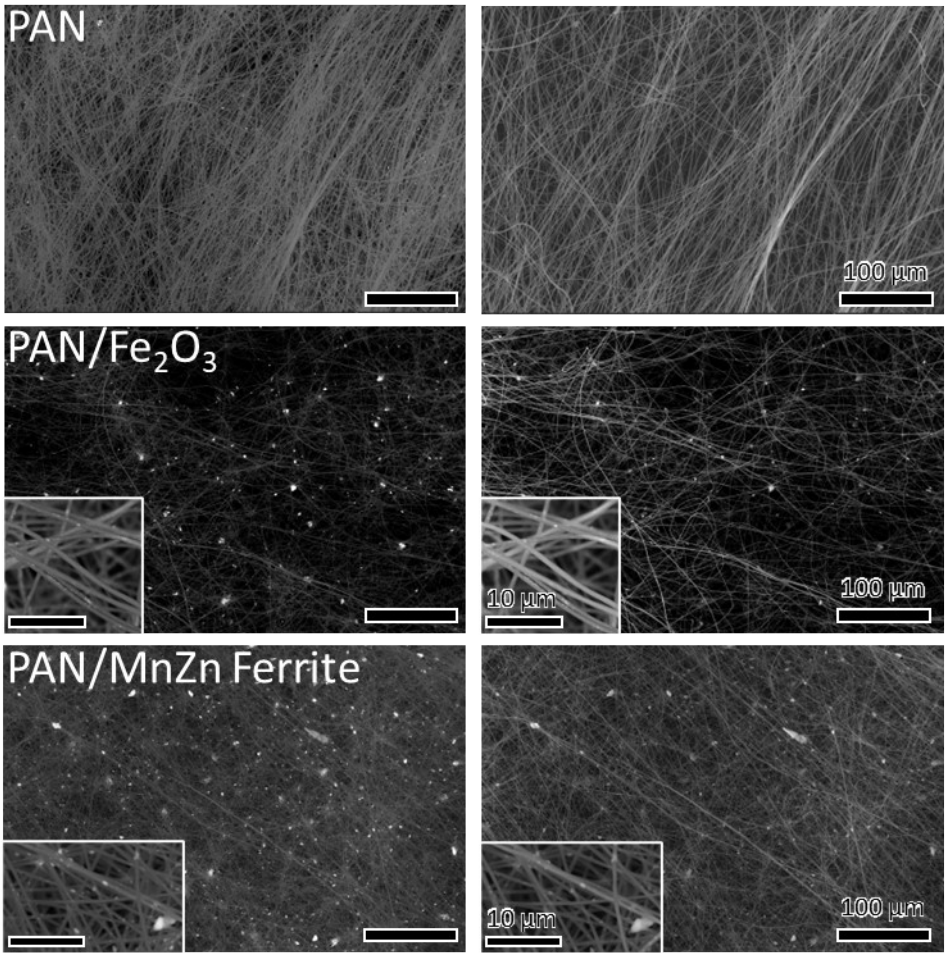

Figure S2 – Backscatter (left column) and secondary (right column) electron imaging of the PAN (top), PAN/Fe_2O_3 (middle) and PAN/MnZn Ferrite (bottom) nanofibers.

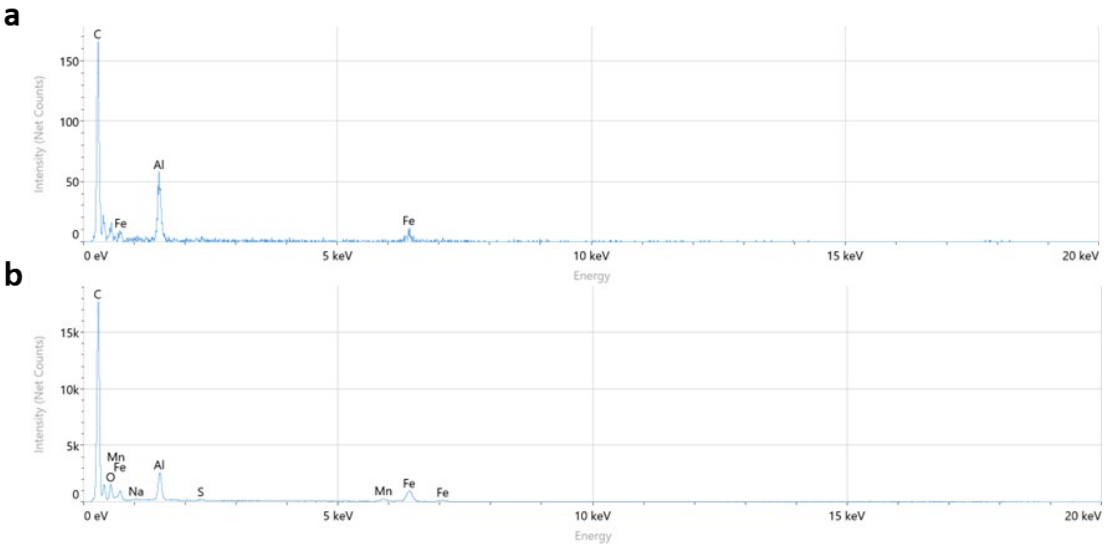

Figure S3 – EDX spectra of the **(a)** PAN/Fe_2O_3 and **(b)** PAN/MnZn Ferrite nanofibers.

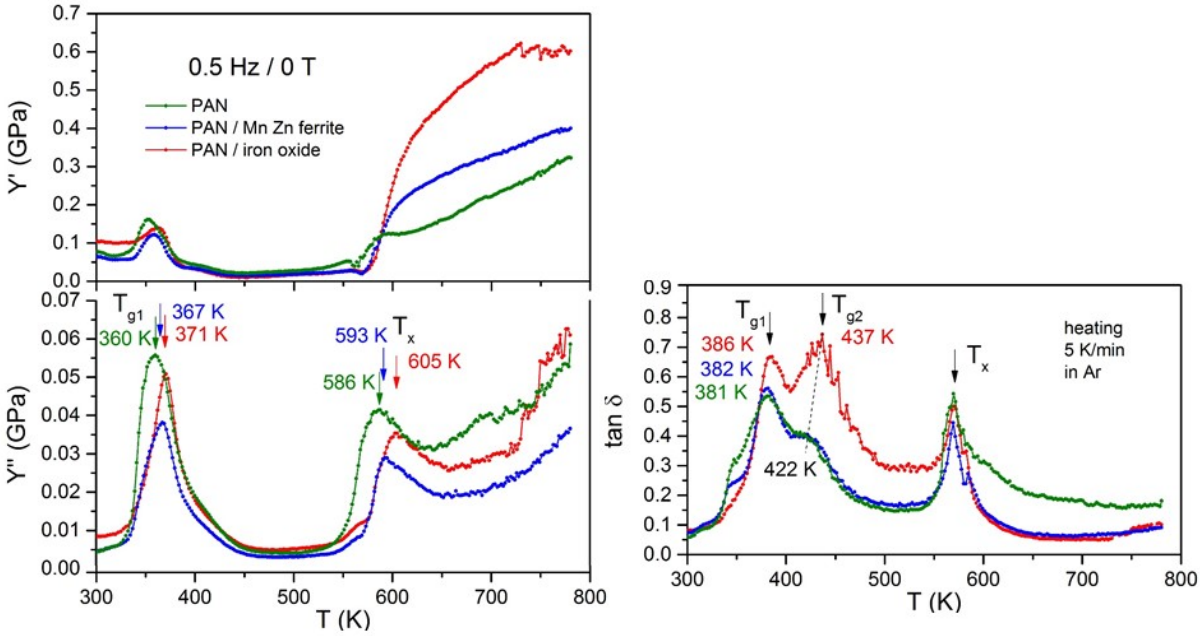

Figure S4 – Comparison of PAN, PAN/MnZn Ferrite and PAN/Fe_2O_3 samples performed at 0.5 Hz at 0 T.

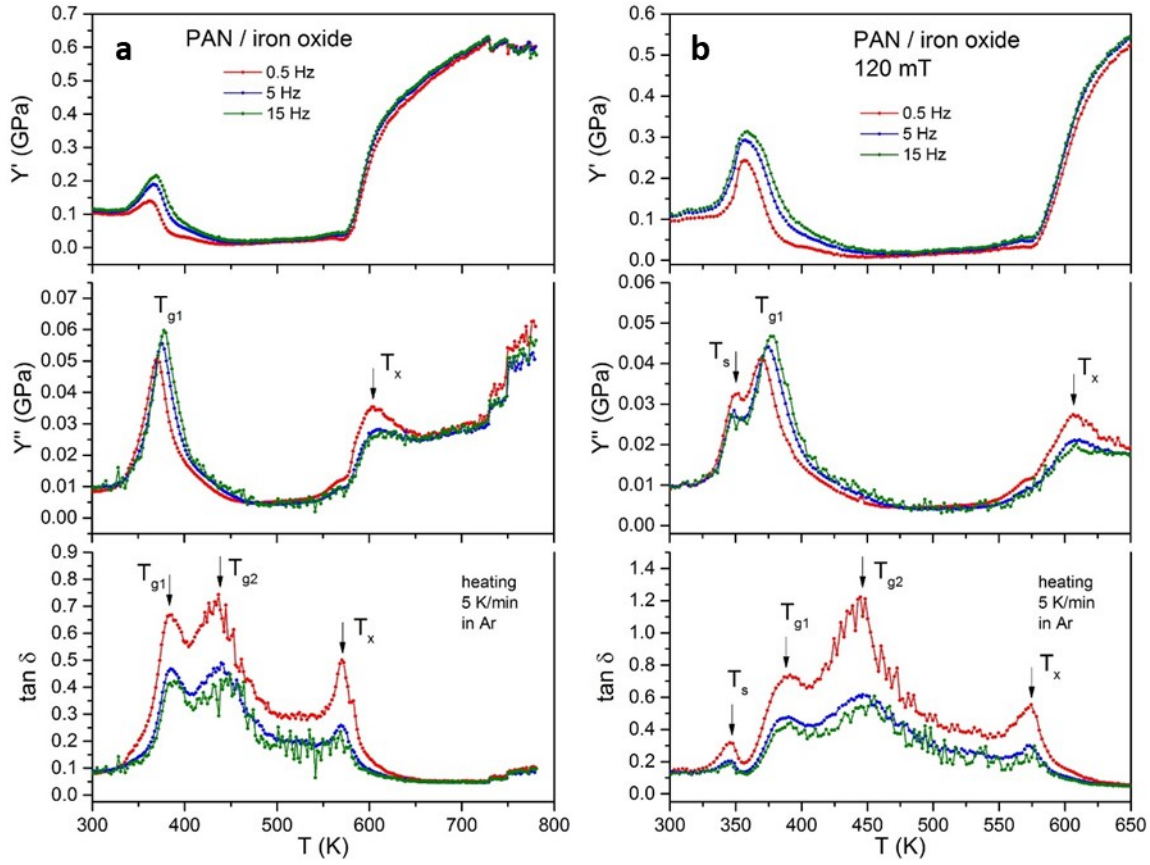

Figure S5 – DMA (storage and loss modulus, tanδ) of PAN/Fe_2O_3 samples at 3 different frequencies at a heating rate of 5 K min^{-1}.

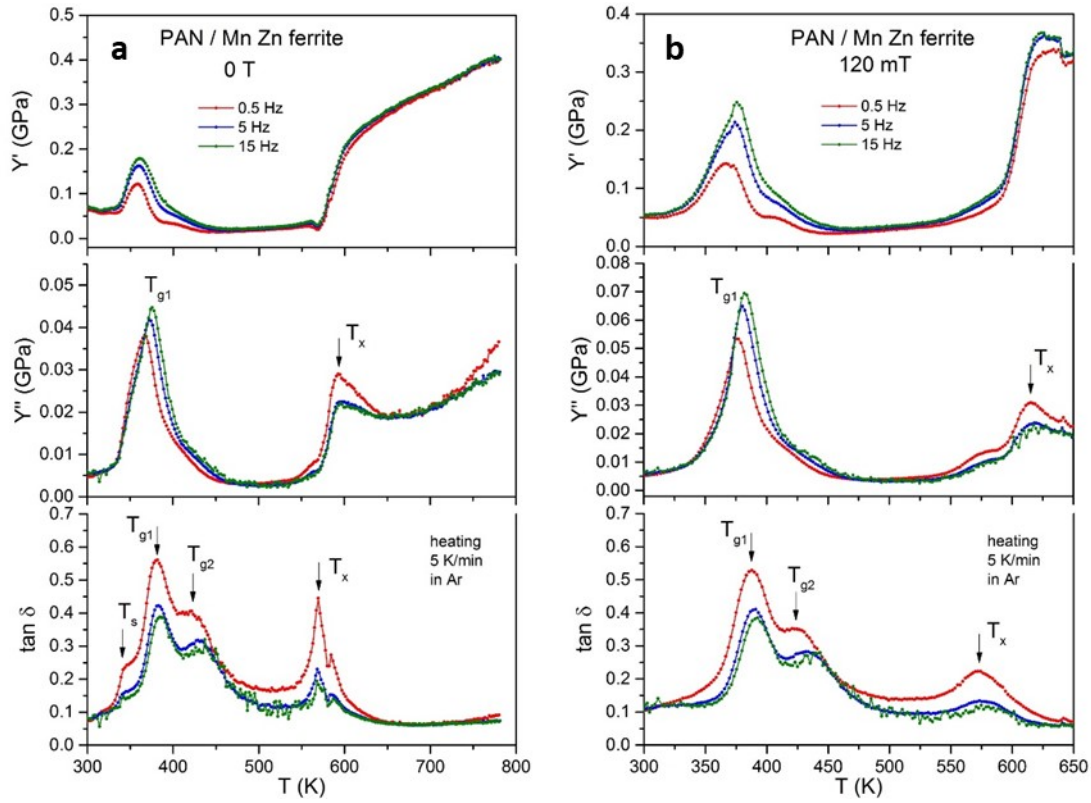

Figure S6 – DMA (storage and loss modulus, tanδ) of PAN/MnZn Ferrite samples at 3 different frequencies at a heating rate of 5 K min^{-1}.

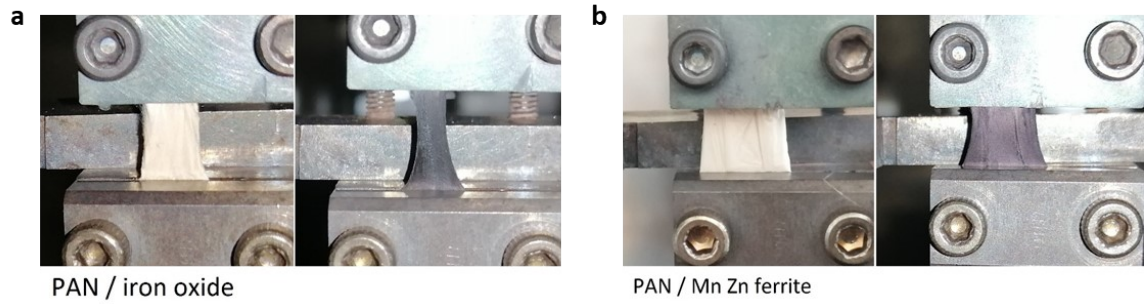

Figure S7 – (a) PAN/Fe_2O_3 and **(b)** PAN/MnZn Ferrite samples before and after DMA.