

Supporting Information to:

**Fabrication of a highly sensitive surface-enhanced Raman
scattering substrate for monitoring of the catalytic degradation
of organic pollutants**

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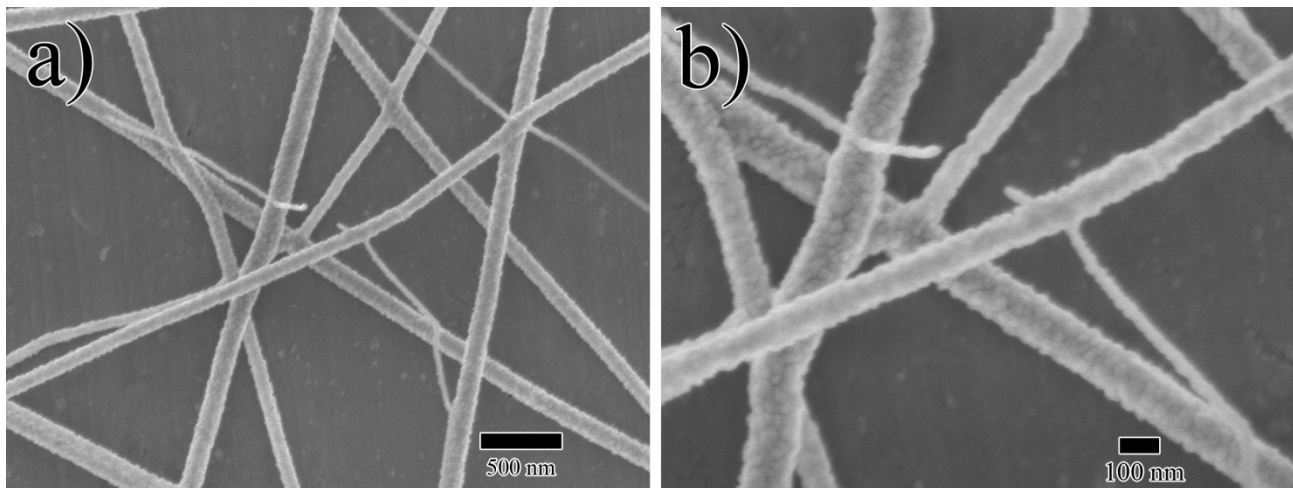


Figure S1. SEM images of ZnO nanofibers deposited on the surface of aluminum foil with different magnifications.

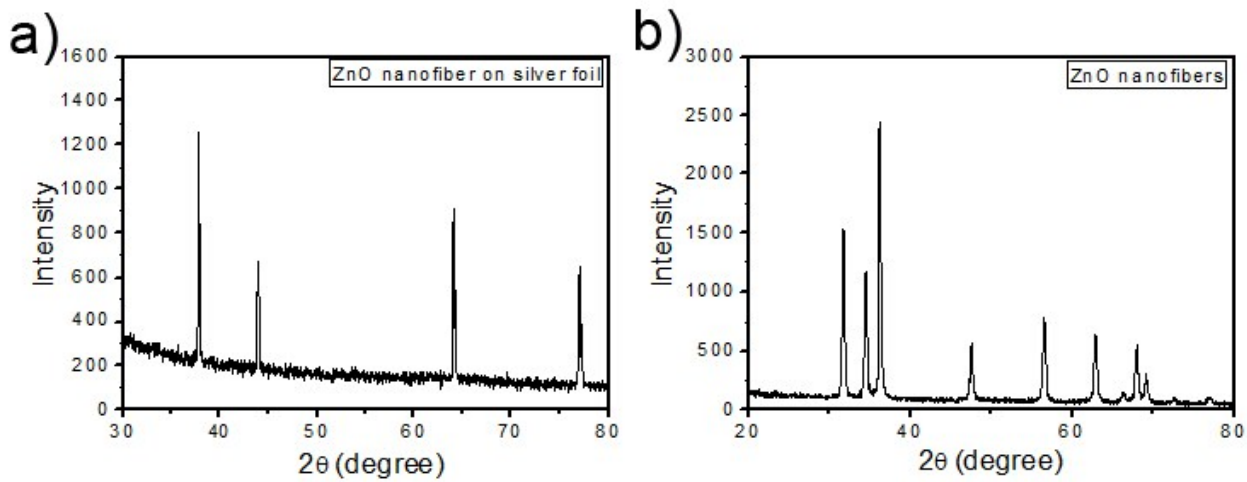


Figure S2. a) XRD pattern of the as-prepared ZnO nanofibers deposited on the surface of silver foil.

b) XRD pattern of the as-prepared ZnO nanofibers that obtained by peeling off the electrospun PVP/zinc acetate nanofibers from the substrate and then calcinating in air at 450°C.

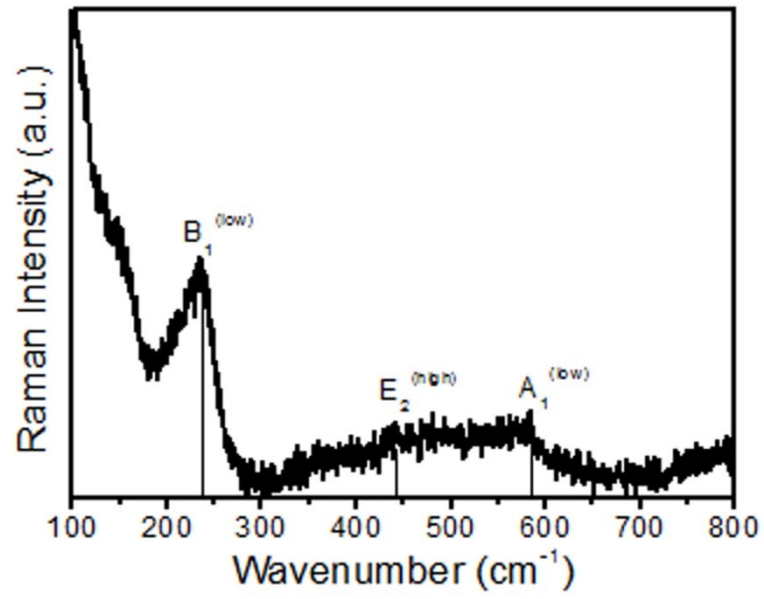


Figure S3. Typical Raman spectrum of ZnO nanofibers deposited on the surface of silver foil showing the characteristic peaks of wurtzite crystal phase of ZnO.

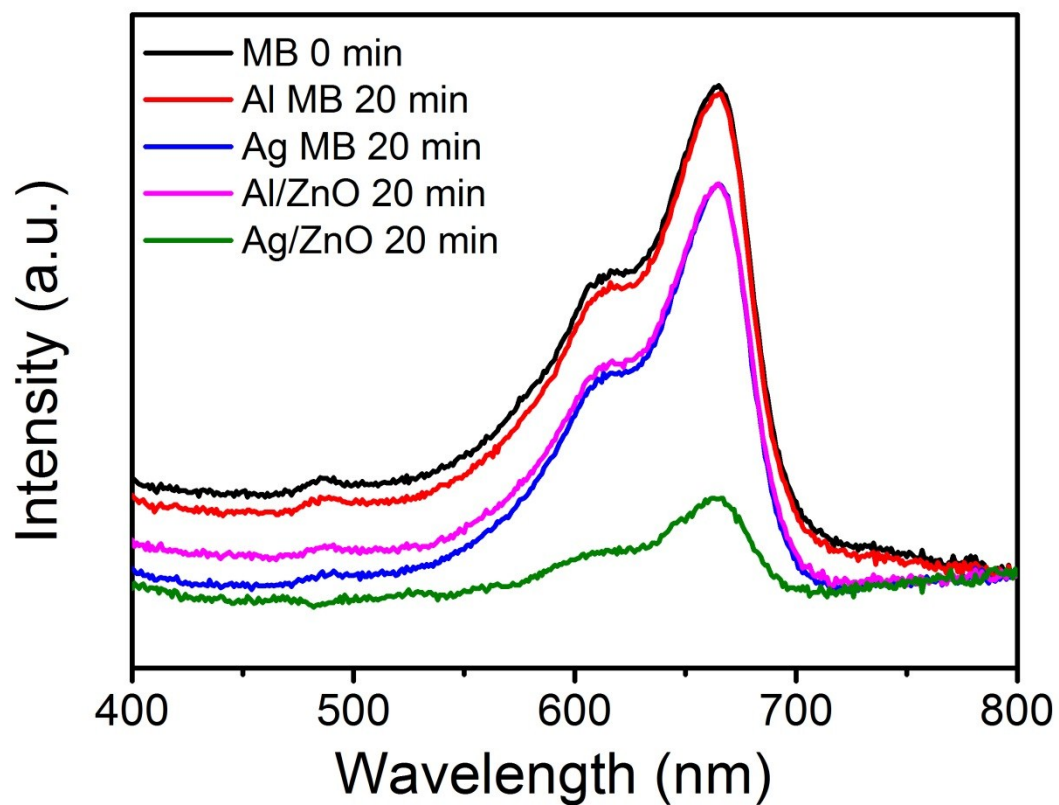


Figure S4. UV-vis absorbance spectra of MB solution in the presence of different kinds of photocatalysts (from top to bottom: without photocatalyst, aluminum foil, silver foil, ZnO nanofibers deposited on the surface of aluminum foil, ZnO nanofibers deposited on the surface of silver foil) after exposure to UV light for 20 min.

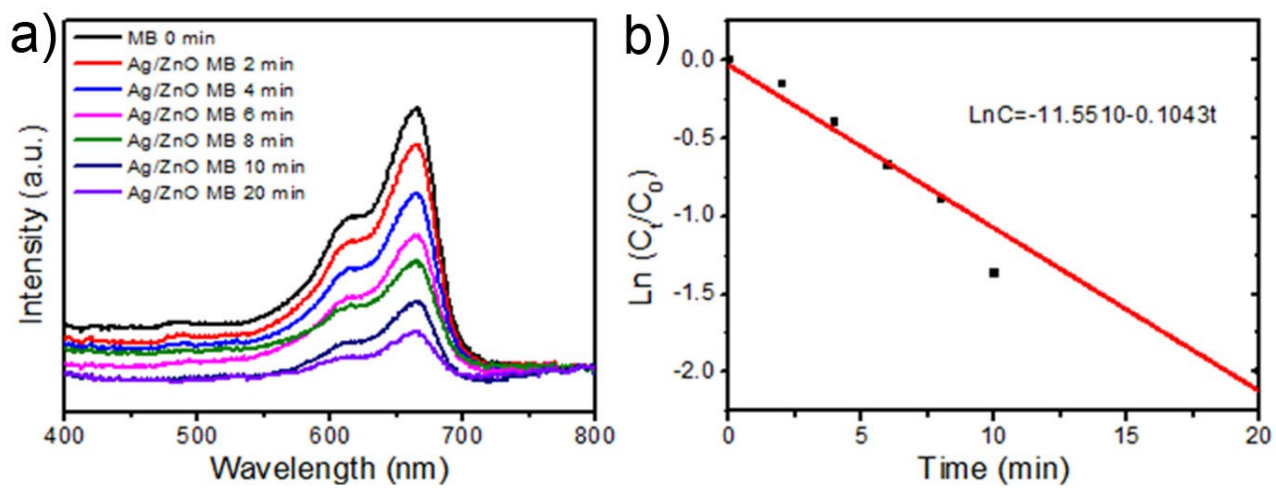


Figure S5. a) Time-dependent absorbance spectra of MB solution in the presence of ZnO nanofibers deposited on the surface of silver foil after exposure to UV light for different duration. b) Plot of $\ln(C_t/C_0)$ of MB as a function of time for the photocatalytic reaction by ZnO nanofibers deposited on the surface of silver foil.

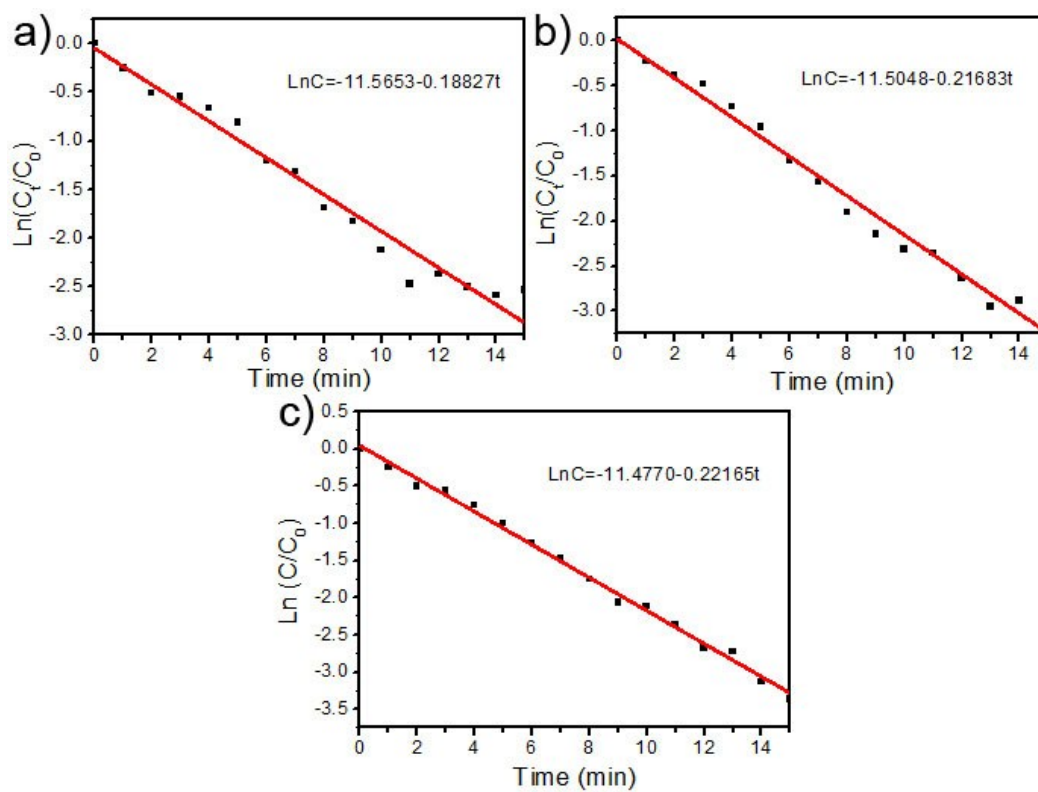


Figure S6. The curves of the linear relationship between the concentration of MB and the reaction time according to the bands at (b) 453 cm^{-1} , 1031 cm^{-1} and (c) 1441 cm^{-1} .