

Supplemental Material to:

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**Homogenous photocatalytic decontamination of prion
infected stainless steel and titanium surfaces**

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Supplementary Information

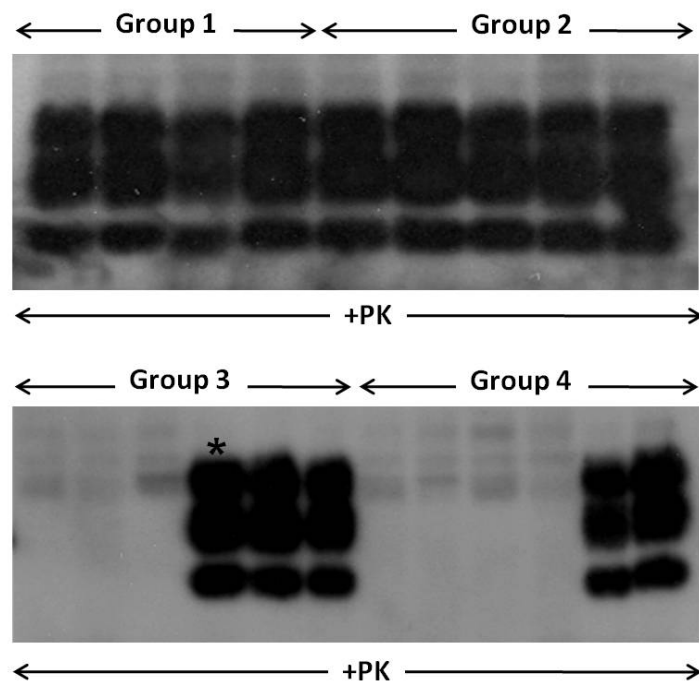


Figure 1S. Investigation of the presence or absence of PrP^{Sc} in brain tissue of C57BL mice by immunoblotting¹³.

*An asymptomatic individual of group 3 (photo-Fenton, 180 min) was found with PK-resistant cerebral PrP, 453 days post inoculation.

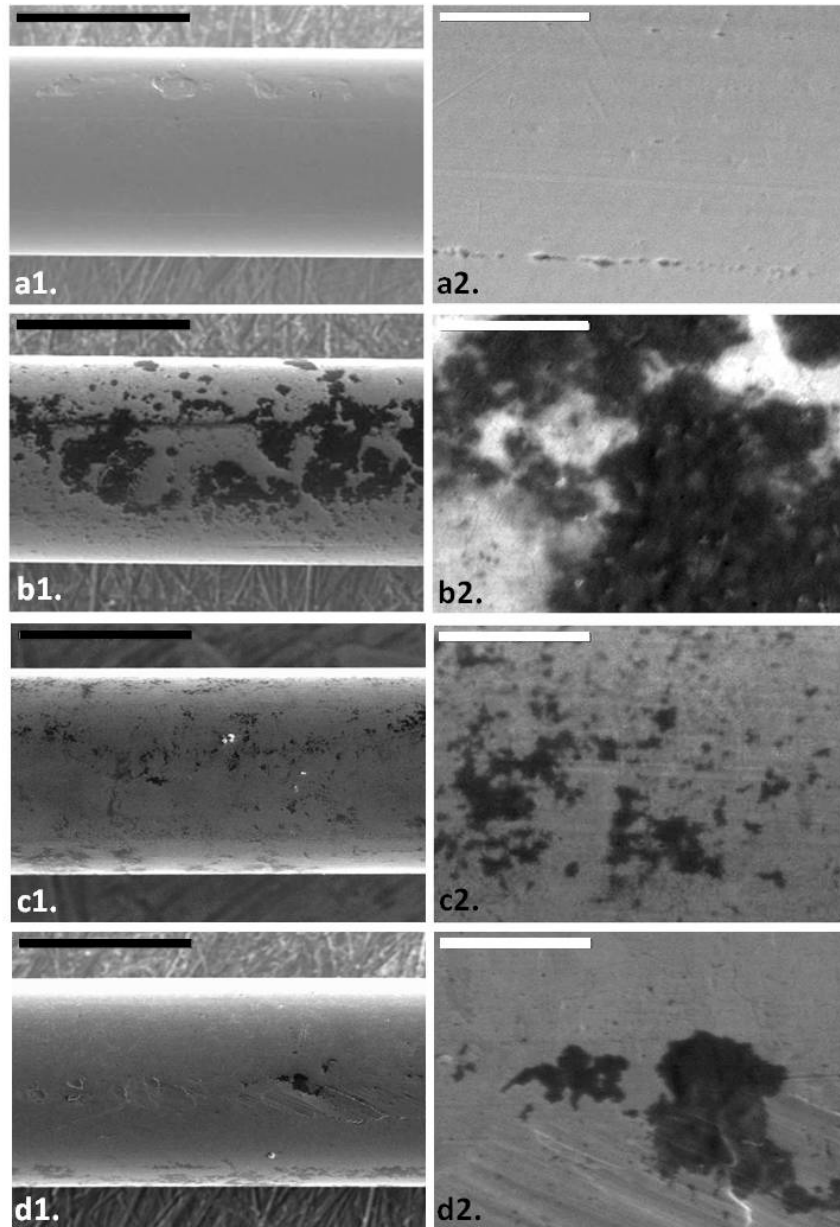


Figure 2S. Scanning Electron Microscopy of stainless steel wires. a, uncontaminated, b, incubated with 10% hamster brain homogenate infected with the 263K prion strain, c, incubated with 10% hamster brain homogenate infected with the 263K prion strain and treated with $56 \mu\text{g mL}^{-1} \text{Fe}^{3+}$, $300 \mu\text{g mL}^{-1} \text{h}^{-1} \text{H}_2\text{O}_2$, $\text{pH}=3.5$, UV-A for 240 min, d, incubated with 10% hamster brain homogenate infected with the 263K prion strain and treated with $56 \mu\text{g mL}^{-1} \text{Fe}^{3+}$, $300 \mu\text{g mL}^{-1} \text{h}^{-1} \text{H}_2\text{O}_2$, $\text{pH}=3.5$, UV-A for 480 min. White bar: $200 \mu\text{m}$, black bar: $20 \mu\text{m}$. Panels to the right (a2-d2) are close ups of respective areas of the left column (a1-d1).

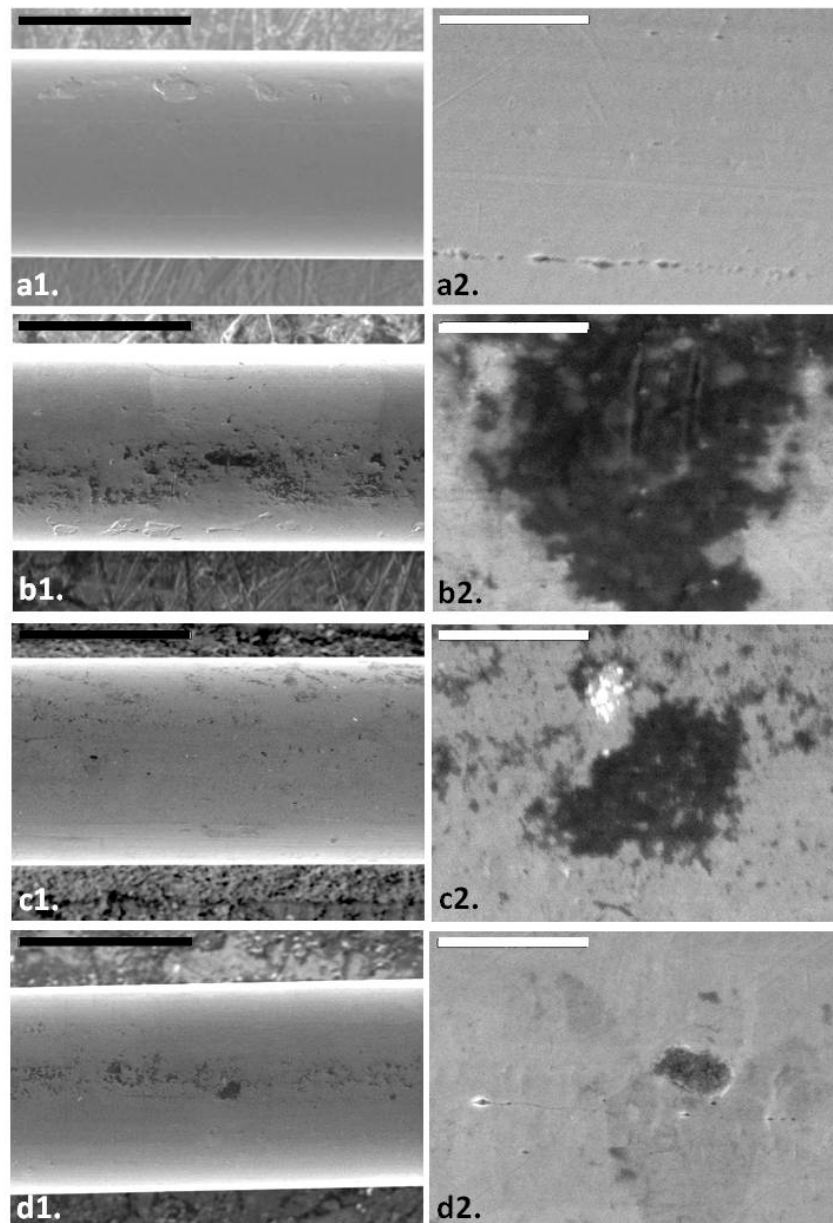


Figure3S. Scanning Electron Microscopy of stainless steel wires. a, uncontaminated, b, incubated with 10% hamster brain homogenate infected with the 263K prion strain, c, incubated with 10% hamster brain homogenate infected with the 263K prion strain and treated with $112 \mu\text{g mL}^{-1} \text{Fe}^{3+}$, $400 \mu\text{g mL}^{-1} \text{h}^{-1} \text{H}_2\text{O}_2$, pH=3.5, UV-A for 240 min, d, incubated with 10% hamster brain homogenate infected with the 263K prion strain and treated with $112 \mu\text{g mL}^{-1} \text{Fe}^{3+}$, $400 \mu\text{g mL}^{-1} \text{h}^{-1} \text{H}_2\text{O}_2$, pH=3.5, UV-A for 480 min. White bar: 200 μm , black bar: 20 μm . Panels to the right (a2-d2) are close ups of respective areas of the left column (a1-d1).

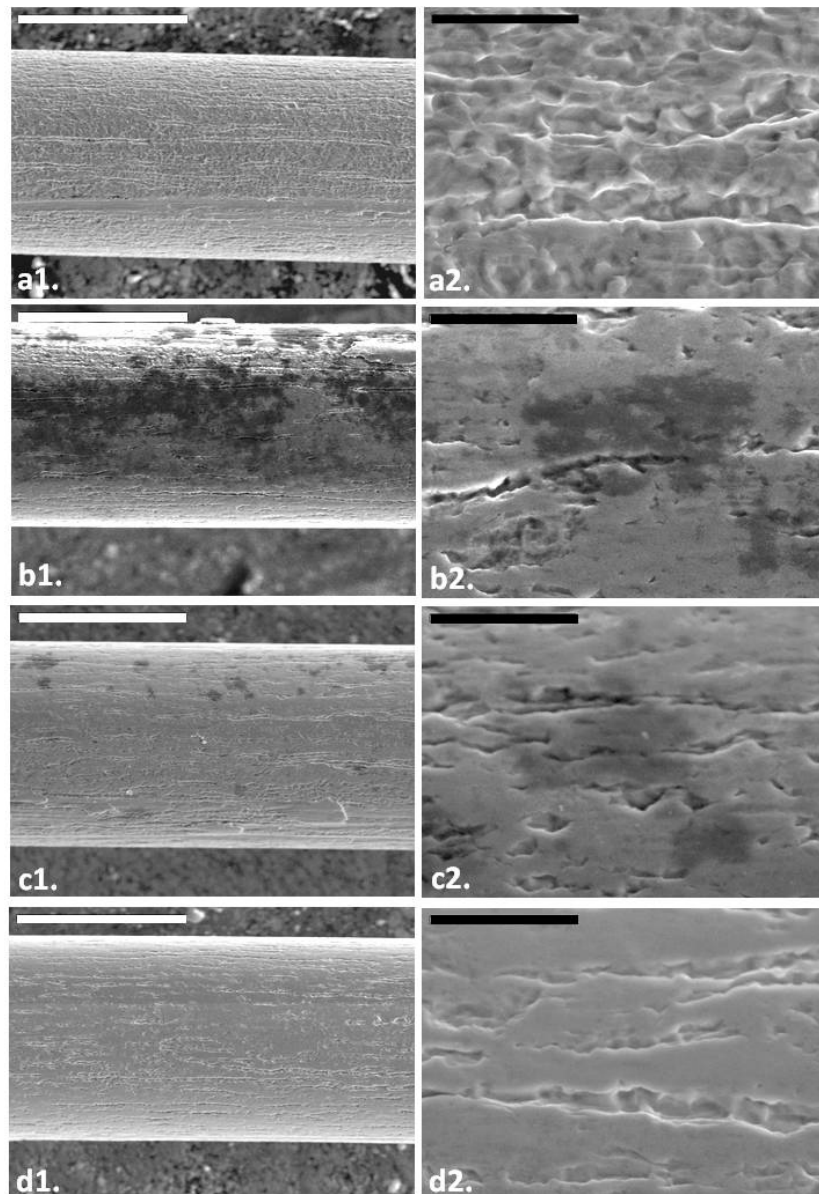


Figure 4S. Scanning Electron Microscopy of titanium wires. a, uncontaminated, b, incubated with 10% hamster brain homogenate infected with the 263K prion strain, c, incubated with 10% hamster brain homogenate infected with the 263K prion strain and treated with $112 \mu\text{g mL}^{-1} \text{Fe}^{3+}$, $400 \mu\text{g mL}^{-1} \text{h}^{-1} \text{H}_2\text{O}_2$, pH=3.5, UV-A for 240 min, d, incubated with 10% hamster brain homogenate infected with the 263K prion strain and treated with $112 \mu\text{g mL}^{-1} \text{Fe}^{3+}$, $400 \mu\text{g mL}^{-1} \text{h}^{-1} \text{H}_2\text{O}_2$, pH=3.5, UV-A for 480 min. White bar: $200 \mu\text{m}$, black bar: $20 \mu\text{m}$. Panels to the right (a2-d2) are close ups of respective areas of the left column (a1-d1).

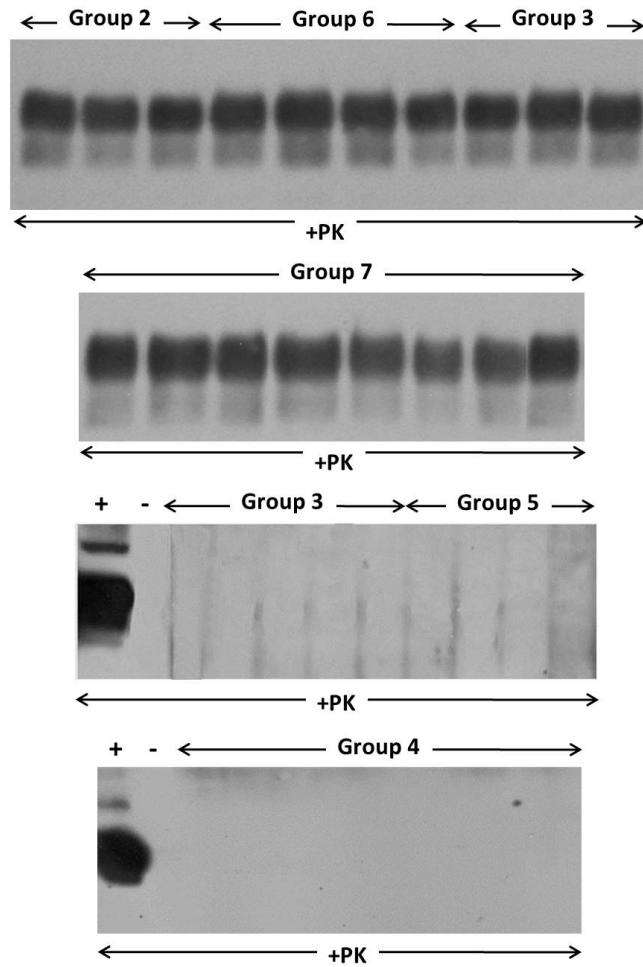


Figure 5S. Investigation of the presence or absence of PrP^{Sc} in brain tissue of golden Syrian hamsters by immunoblotting¹³. (+): positive control, (-): negative control. The brains of all asymptomatic animals (>505d.p.i.) showed no sign of PrP^{Sc} after PK treatment.