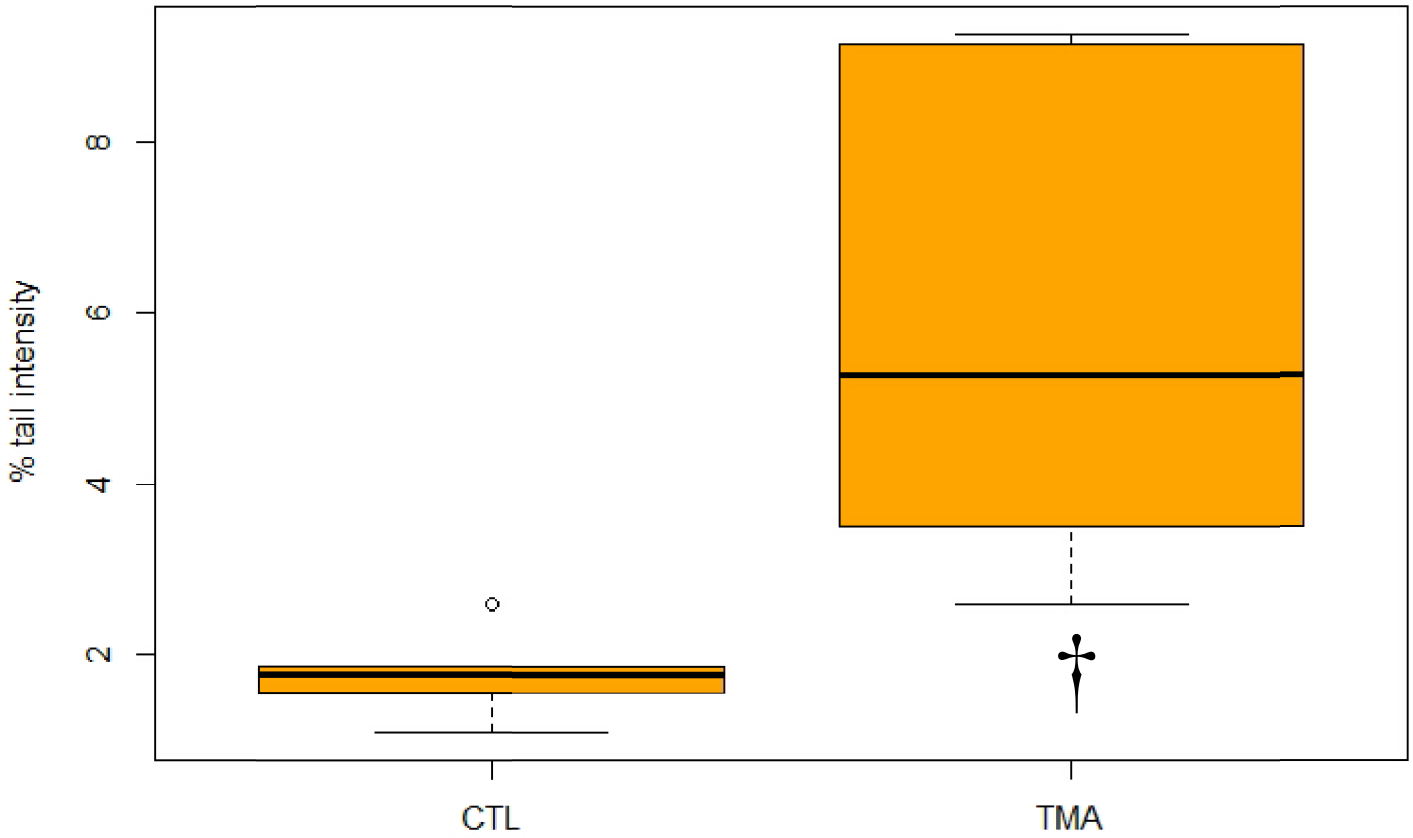


**Supplementary Figure 8: Genotoxicity of SiO2-NPs**.
DNA strand breaks and/or alkali-labile sites were quantified using the alkaline version of the comet assay. Cells were grown in 12-well plates, exposed to particles (20$\mu$g/ml for 24 hours), then harvested and stored at -80°C in 85.5 g/L sucrose, 11.76 g/L sodium citrate, 50 mL/L DMSO, pH 7.6. Cells were then embedded in 0.5% low melting point agar. Cells were lysed by immersion in 2.5 M NaCl, 100 mM EDTA, 10 mM Tris, 10 % DMSO, pH 10 overnight at 4°C, then the slides were rinsed in 0.4 M Tris-HCl pH 7.4. Slides were then immersed in cold migration buffer (NaOH 300 mM, EDTA 1mM) for 30 min to allow DNA to unwind. Electrophoresis was performed at 25 V, 300 mA, for 30 min. After neutralization by washing 3 times in 0.4 M Tris-HCl, pH 7.4, the cells were stained with Gel Red (VWR). % tail intensity was scored on 50 nuclei, using the Comet IV software (Perceptive instruments). prior to immersion in lysis buffer. Experiments were repeated 3 times independently. Results were normalized for % tail DNA in control (unexposed) cells, and expressed as mean percentage ± standard error calculated over the three independent experiments. statistical significance was assessed with both non-parametric one-way analysis of variance on ranks approach (Kruskal-Wallis) and paired comparison Mann-Whitney U-test, using Statistica 8.0 (Statsoft, Chicago, USA).
Statistical significance: †P<0.01