Quantification of 8-oxodGuo Lesions in Double-Stranded DNA Using a Photoelectrochemical DNA Sensor

Bintian Zhang[1], Liang-Hong Guo[1*], Marc M. Greenberg[2*]

[1]*State Key Laboratory of Environmental Chemistry and Ecotoxicology, Research Center for Eco-environmental Sciences, Chinese Academy of Sciences, Beijing 100085, China*
[2]*Department of Chemistry, Johns Hopkins University, 3400 North Charles Street, Baltimore, Maryland 21218, USA*
*Corresponding Author: （E-mail）LHGuo@rcees.ac.cn; mgreenberg@jhu.edu

Supporting Information

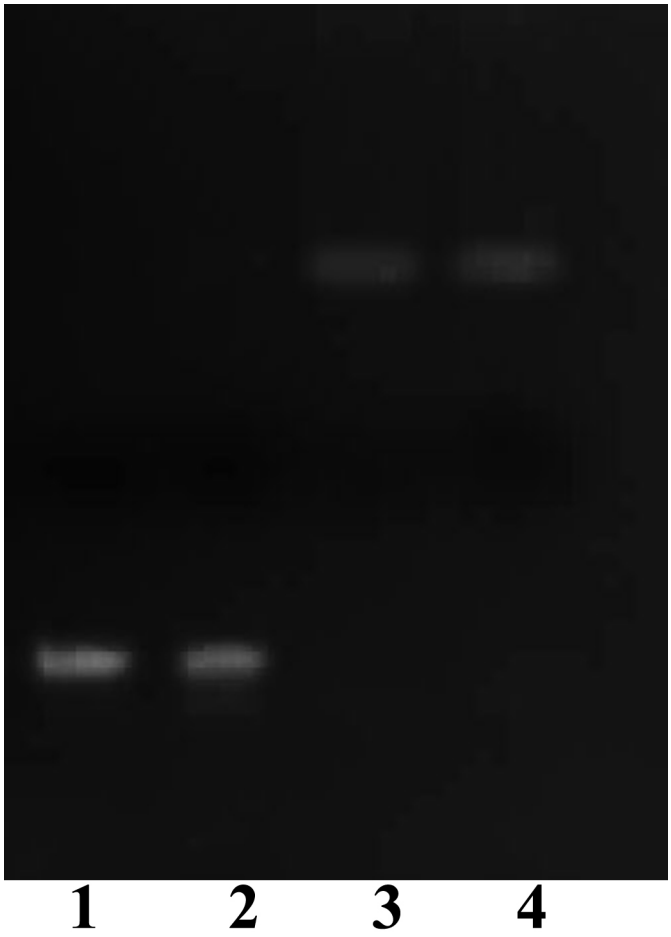

Figure S1 PAGE electrophoresis images of Duplex 2 after treatment of (1) 20 mM PB buffer, (2) 1 U Fpg solution, (3) 5 U Fpg solution, (4) 10 U Fpg solution for 1 h.

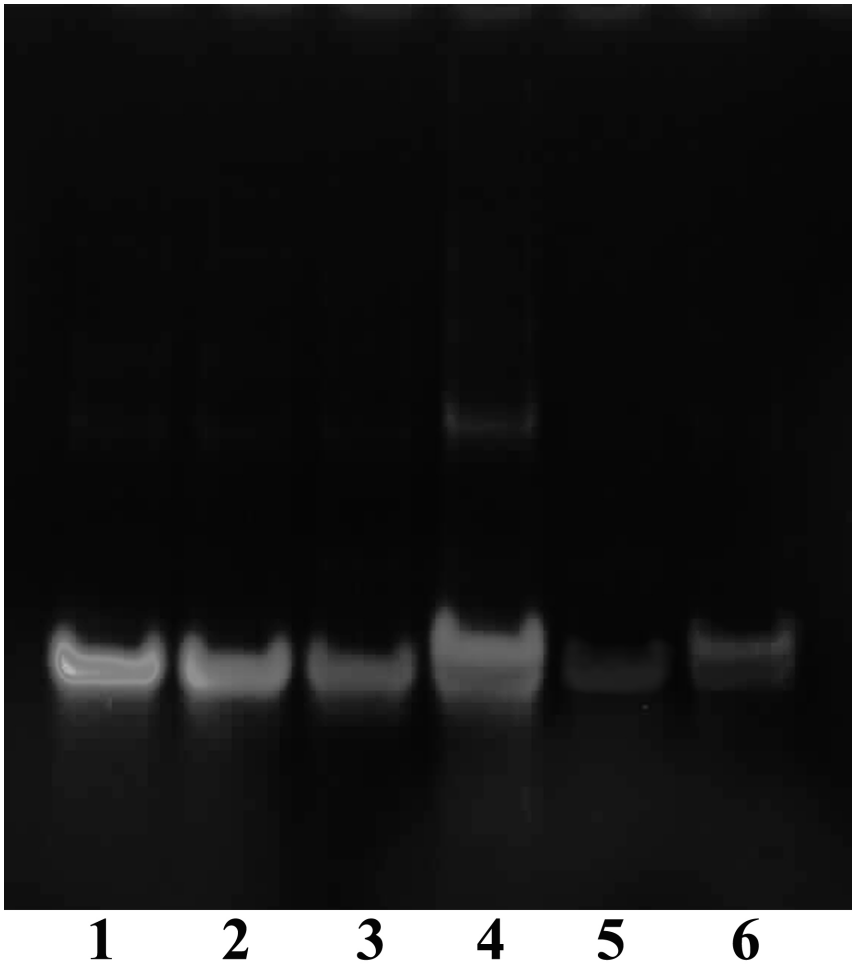

Figure S2 PAGE electrophoresis images of different types of DNA: (1) Duplex 1, (2) Duplex 1 after biotinylation, (3) Duplex 2, (4) Duplex 2 after biotinylation, (5) Duplex 3, (6) Duplex 3 after biotinylation.

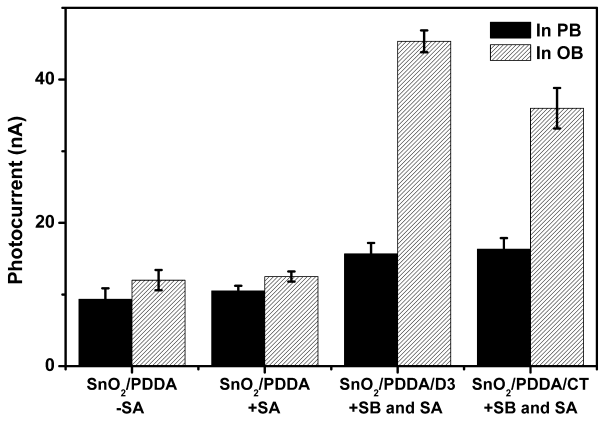

Figure S3 Photocurrent response of different films in PB buffer and oxalate buffer. **PB**: 20 mM phosphate buffer, pH 7.4; **OB**: 30 mM oxalate buffer, pH 5.8; **-SA**: without the coating of Ru-streptavidin; **+SA**: with the coating of Ru-streptavidin; **SnO_2/PDDA/D3**: electrodes with the assembly of Duplex 3; **SnO_2/PDDA/CT**: electrodes with the assembly of CT-DNA after the exposure to 50 μM Fe^{2+}/200 μM H_2O_2 for 30 min.