

Supporting Information for the Manuscript

Sensitive Marker of the Cisplatin- DNA Interaction: X-ray Photoelectron Spectroscopy of Cl

Fangxing Xiao, Xiaobin Yao, Qianhong Bao, Danzhen Li, Yi Zheng*

Research Institute of Photocatalysis, State Key Laboratory Breeding Base of Photocatalysis, College of Chemistry and Chemical Engineering, Fuzhou University, Fuzhou 350002, PR China.

RECEIVED DATE:

TITLE RUNNING HEAD: cisplatin interaction with DNA

***CORRESPONDING AUTHOR:**

Research Institute of Photocatalysis, Fuzhou University, Fuzhou 35002, PR China.

Telephone: (86) 0591-83779153

Fax: (86) 591-83779105

Email address: Yizheng@fzu.edu.cn

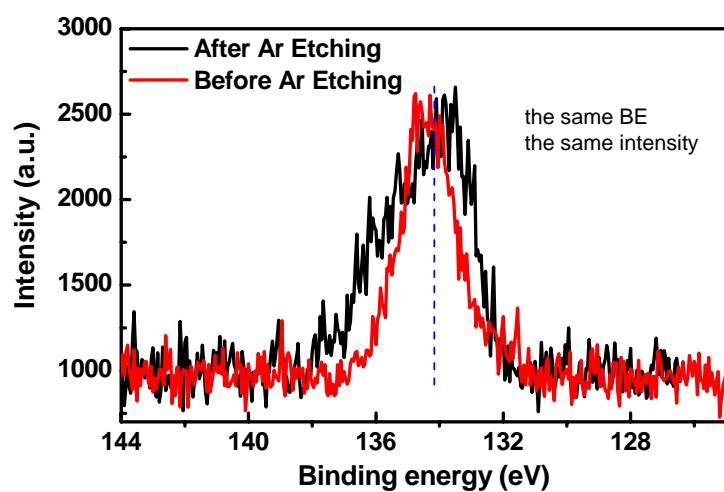


Fig. S1 The P 2p spectrum of cisplatin-oligo complex with ratio of 10:1 before and after Ar etching.

➤ Carbon^[1]

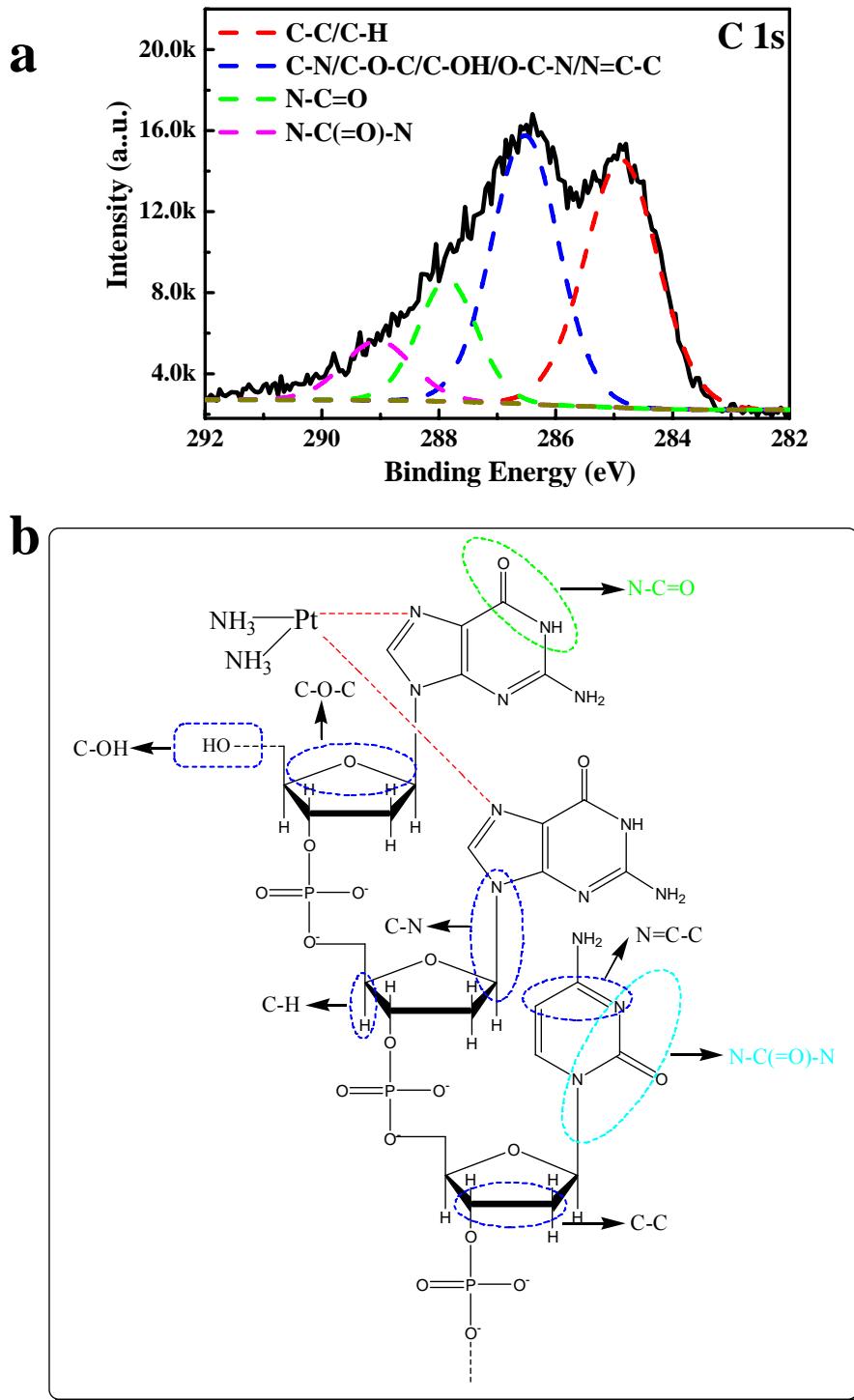


Figure S2. (a) High-resolution XPS C 1s spectrum of pure oligo and (b) schematic illustration showing the detailed chemical bonds species in the framework of cisplatin-oligonucleotide complex.

➤ Nitrogen^[2,3,4,5]

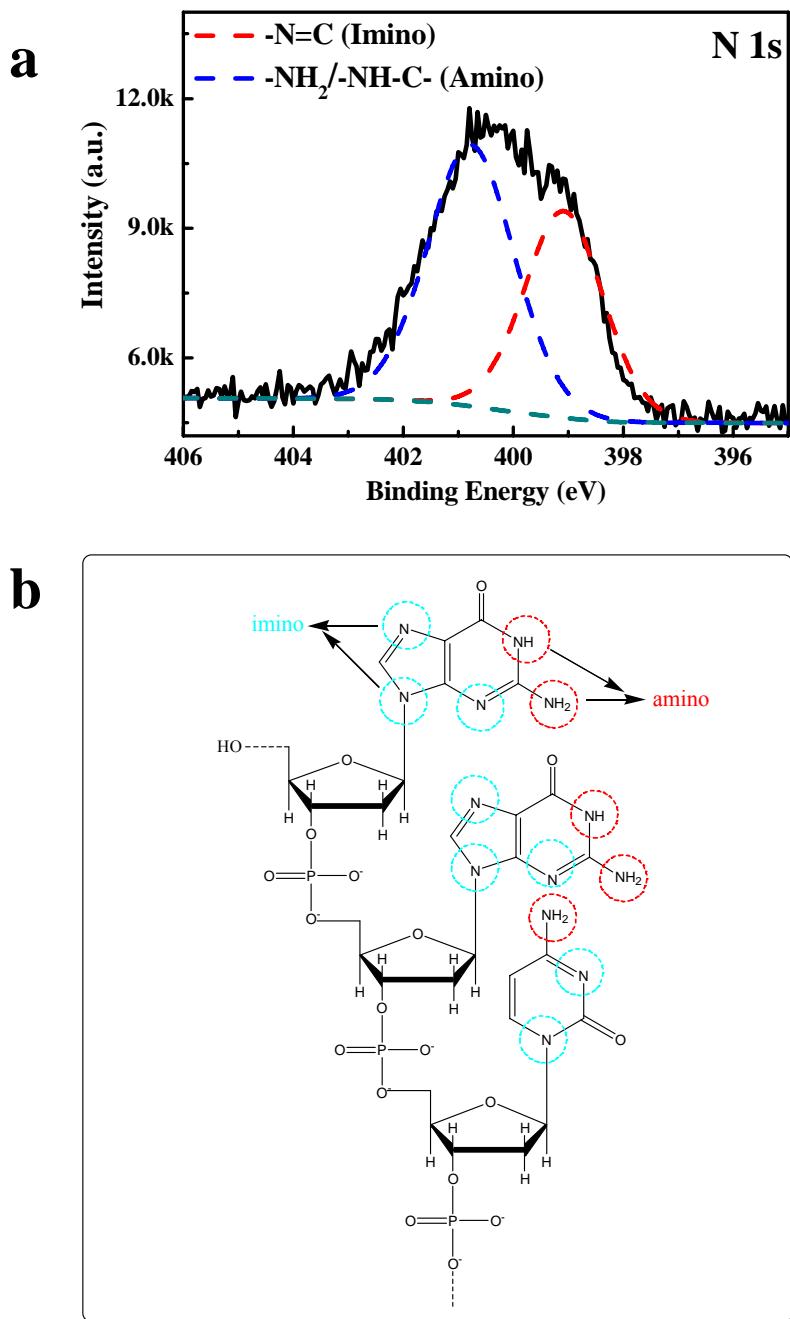


Figure S3. (a) High-resolution XPS N 1s spectrum of oligo and (b) schematic illustration presenting the specific chemical bonds species in the framework of cisplatin-oligonucleotide complex.

➤ Oxygen^[1]

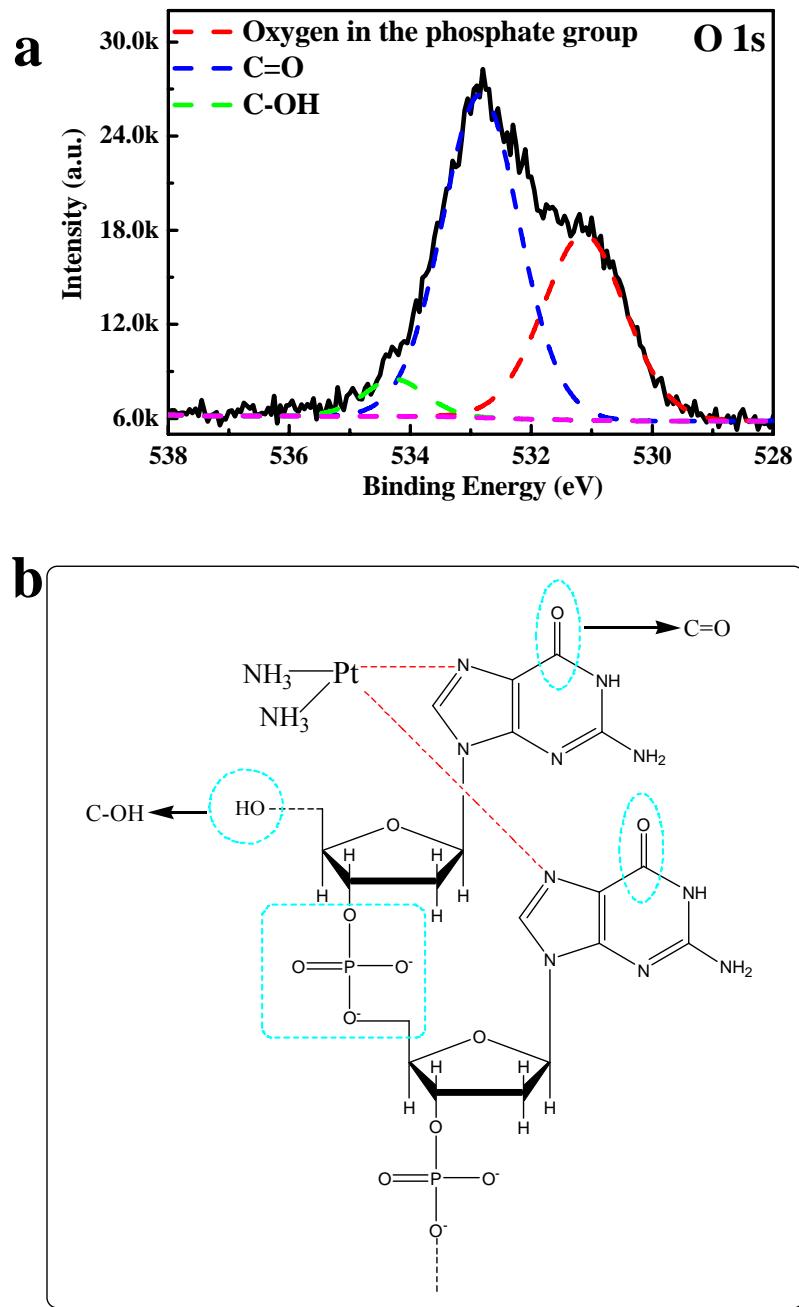


Figure S4. (a) High-resolution XPS O 1s spectrum of oligo and (b) schematic illustration showing the detailed chemical bonds in the cisplatin-oligonucleotide complex.

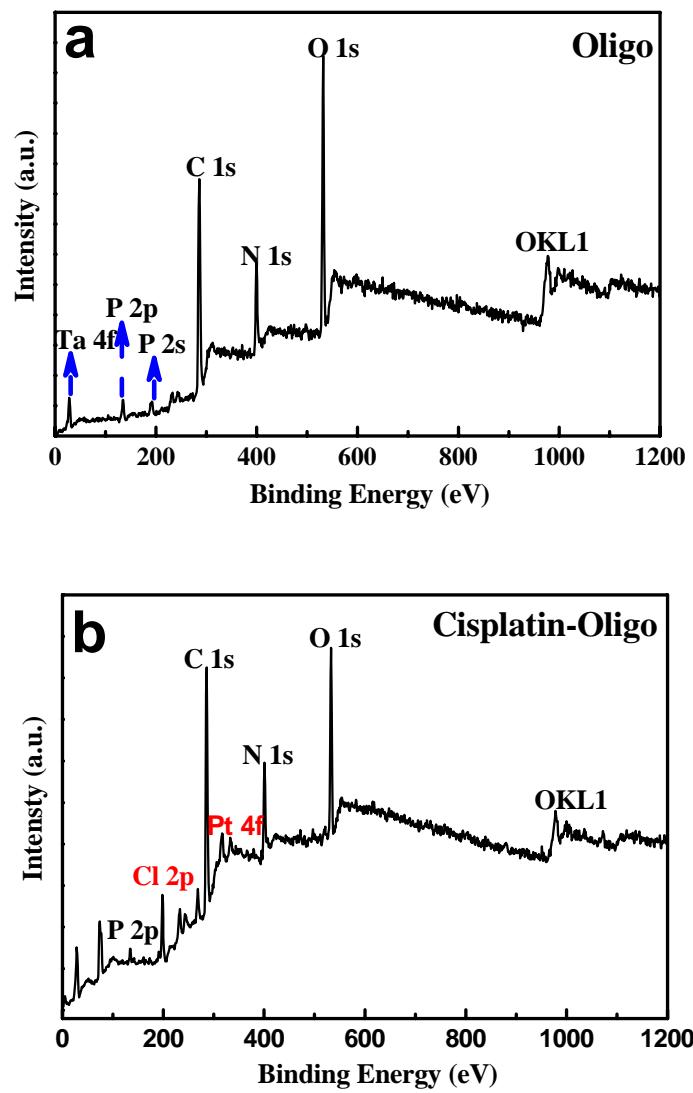


Figure S5. (a) XPS survey spectra of oligo and (b) cisplatin-oligo complex on the tantalum film.

➤ Reference

- 1 S. Ptasinska, A. Stypczyńska, T. Nixon, N.J. Mason, D.V. Klyachko, and L. Sanche, “X-ray induced damage in DNA monitored by X-ray photoelectron spectroscopy,” *J. Chem. Phys.*, 129, 129-134, 2008.
- 2 E. Mateo-Martí, C. Pradier, and J. Martí'n-Gago, Ultraviolet Photostability of Adenine on Gold and Silicon Surfaces. *ASTROBIOLOGY*. 9, 573-579, 2009
- 3 E. Mateo-Martí, C. Briones, E. Roman, E. Briand, C.M. Pradier, and J.A. Martin-Gago, Self-assembled monolayers of peptide nucleic acids on gold surfaces: a spectroscopic study. *Langmuir* 21, 9510–9517, 2005.
- 4 M. Furukawa, T. Yamada, S. Katano, M. Hawai, H. Ogasawara, and A. Nilsson, Geometrical characterization of adenine and guanine on Cu(110) by NEXAFS, XPS and DFT calculation. *Surf. Sci.* 601, 5433–5440, 2007.
- 5 J. Magulick, M.M. Beerbom, and R. Schlaf, Investigation of adenine, uracil, and ribose phosphate thin films prepared by electrospray in vacuum deposition using photoemission spectroscopy. *Thin Solid Films* 516, 2396–2400, 2008.