

**Figure S1**. The product-ion spectra of the ESI-produced  $[M-2H]^{2-}$  ions of d(TTNTT). (a) 'N' = A, (b) 'N' = T, (c) 'N' = G, (d) 'N' = C. The spectra were acquired at a normalized collision energy of 23%.



**Figure S2**. The product-ion spectra of the ESI-produced  $[M-2H]^{2-}$  (a) and  $[M-4H]^{4-}$  (b) ions of d(ATGGCGXGCTAT), where 'X' is  $O^2$ -EtdT.



**Figure S3**. The product-ion spectra of the ESI-produced  $[M-3H]^{3-}$  ions of d(ATGGCGXGCTAT), (a) X = hmdU, (b) X = fmdU, and (c) X = cadU. The spectra were acquired at a normalized collision energy of 16%.