

Supporting information

Polyvalent DNA-graphene nanosheets “click” conjugates

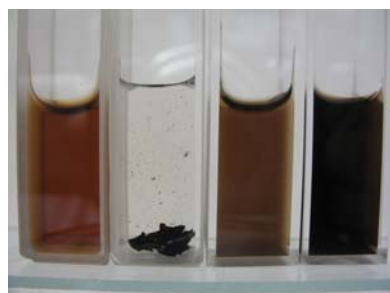
Zihao Wang, Zhilei Ge, Xiaoxue Zheng, Huang Zhang, Cheng Peng*, Chunhai Fan, Qing Huang*

Laboratory of Physical Biology, Shanghai Institute of Applied Physics, Chinese Academy of Sciences, Shanghai 201800, China

SI Tab.1 Sequences of oligonucleotides employed in this work

oligonucleotide	Sequences(5'-3')
TSP-A	ACATTCCTAAGTCTGAAACATTACAGCTTGCTACACGAGAAGAGC CGCCATAGTATTTTTTTTTTTGTATCCAGTGGCTCA
TSP-B	SH-TATCACCAGGCAGTTGACAGTGTAGCAAGCTGTAATAGATGCG AGGGTCCAATAC
TSP-C	SH-TCAACTGCCTGGTGATAAAACGACACTACGTGGGAATCTACTA TGGCGGCTCTTC
TSP-D	SH-TTCAGACTTAGGAATGTGCTTCCCACGTAGTGTCGTTTGTATT GGACCCTCGCAT
Click-reporter	ACTGACTCAACTCCTC- <i>Alkyne</i>
FAM-DNA	GAGGAGTTGAGTCAGT- <i>FAM</i>
Thiolated DNA on AuNPs	GAGGAGTTGAGTCAGTTTTTTTTTTT-SH
target	GAGGAGTTGAGTCAGTTGAGCCACTGGATAC
non-complementary DNA	TCTTGTTACCTGGGGGAGTATTGCGGAGGAAGGT
Mismatched NA	GAGGAGTT C AGTCAGTTGAGCCACTGGATAC

SI Fig.1 images of GO in water, Cl-graphene in water, Cl-graphene in DMSO and Az-graphene in water

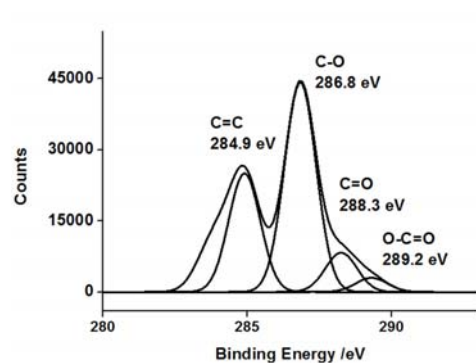


SI Fig.2 Images of well dispersion of Az-graphene in water containing Cu^{2+} with DNA assist (left)

and the flocky precipitates of Az-graphene in water containing Cu^{2+} without DNA assist (right)



SI Fig.3 XPS spectrum of GO



SI Fig.4 Images of agarose gel matrices after electrophoretic separation experiments



SI Fig.5 color reaction of DNA-graphene with H_2O_2 (a), H_2O_2 with TMB (b), DNA-graphene with TMB (c) and DNA-graphene in the presence of TMB and H_2O_2 (d)



SI Fig.6 Standard curve of FAM-DNA

