

Supporting Information for

A high-sensitive surface acoustic wave biosensor for the detection of Hg^{2+} based on thymine - Hg^{2+} - thymine structure

Huimin Sun¹, Chunzhen Yang¹ and Hong Wang*¹

¹ School of Materials, Shenzhen Campus of Sun Yat-sen University, Shenzhen 518107, P. R. China.

E-mail: wanghong3@mail.sysu.edu.cn

Fig. S1 Structural formula of obtained T- Hg^{2+} -T base pair.

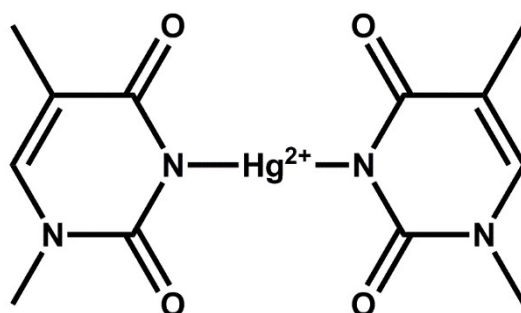


Fig. S2 AFM topological morphology of the sensitive region surface of the SAW biosensor after: (a) DNA probe adsorption, (b) immobilization of Hg^{2+} . (c) Section profiles of the white line plotted in (a). (d) Section profile of the white line plotted in (b).

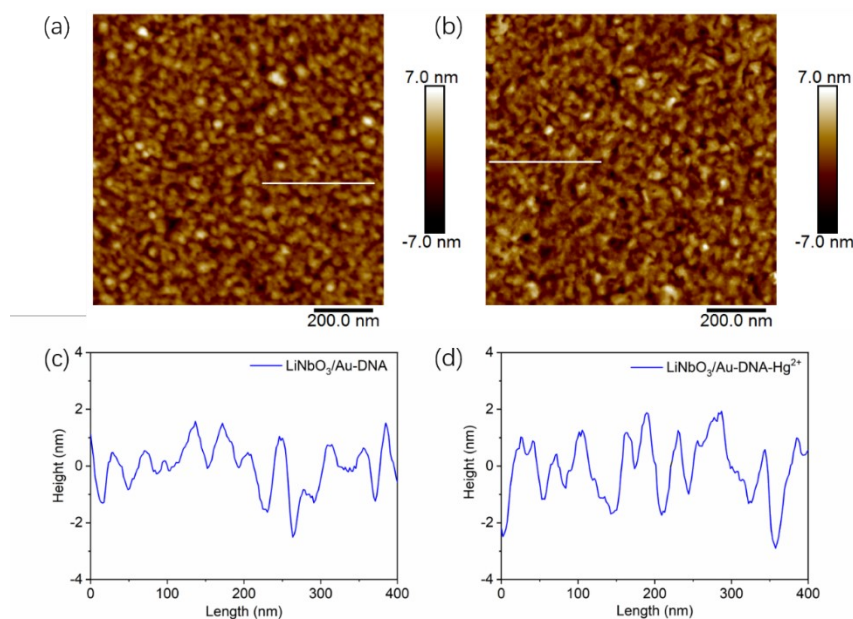


Fig. S3 The CAM of LiNbO_3 surface.

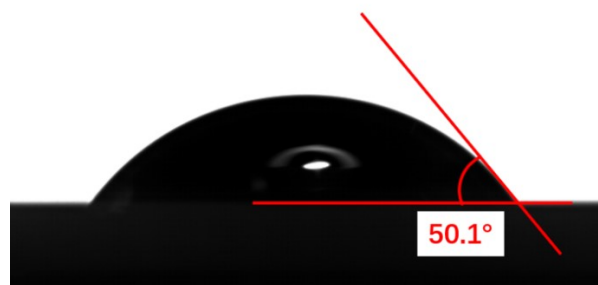


Fig. S4 (a) The SAW biosensor exhibited distinct responses to mixtures containing Hg^{2+} (0.5 nM) with Ag^+ (1 nM) or Na^+ (1 nM) in comparison to the individual pure solutions. (b) A comparative analysis was conducted on the responses of the proposed SAW biosensor to a mixture containing 0.1 nM Hg^{2+} solution and 1 nM Na^+ solution against the responses to the respective individual pure solutions. Error bars indicate the standard deviation.

