

## Supplementary Information

### Hybrid hydrogel film with phenylboronic acid-containing graphene oxide for continuous saliva-level monitoring

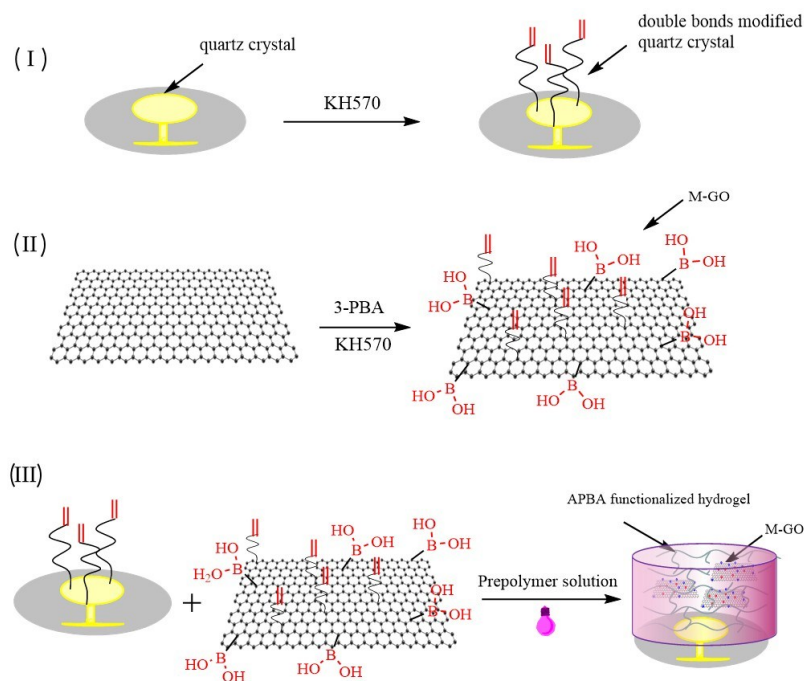


Figure S1. Procedure for the synthesis of hybrid hydrogel film

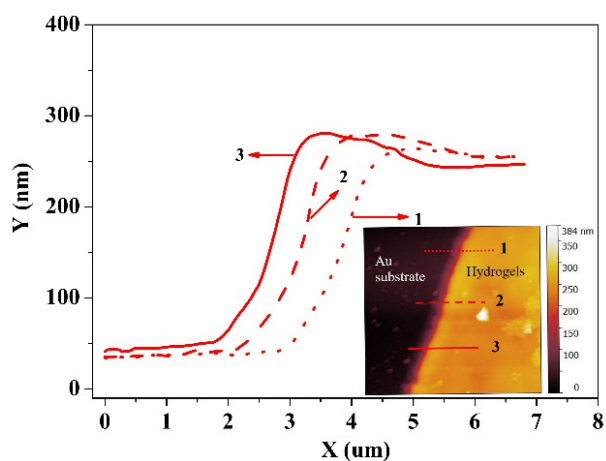


Figure S2. The thickness of hydrogel film

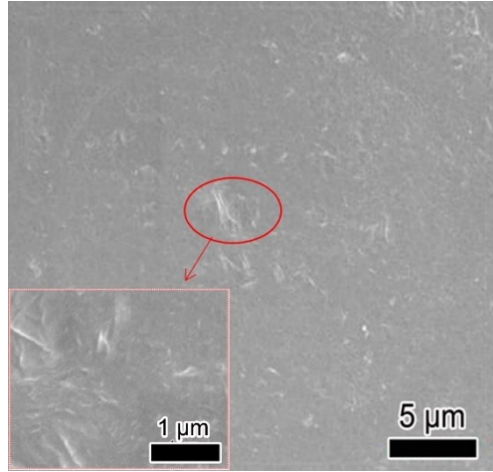


Figure S3. SEM image hybrid hydrogel film-0.6%

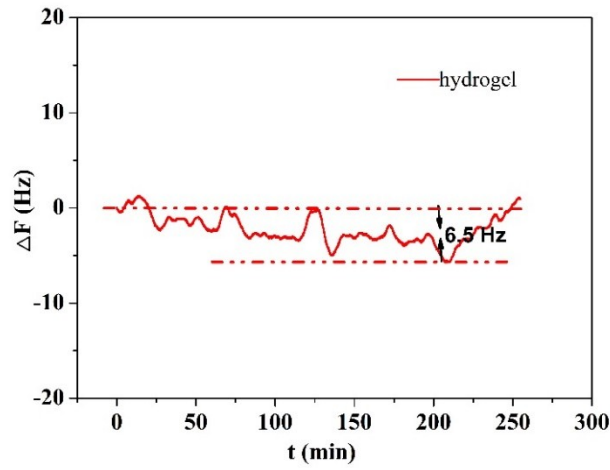


Figure S4. the stability of hydrogel film coated on QCM chip

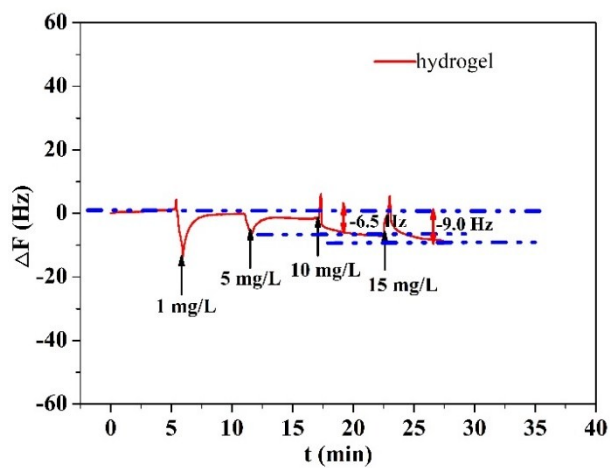


Figure S5. The low detection limit of hydrogel coated on QCM chip

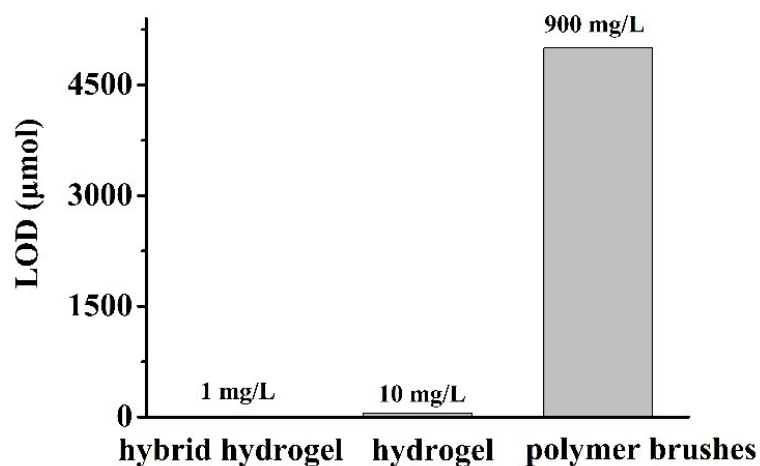


Figure S6. The LOD of the hybrid hydrogel, hydrogel, and polymer brushes

Table S1. The % RSD of hydrogel and hybrid hydrogel-coated QCM sensor after nine association–dissociation cycles.

Film	Mean of glucose response (Hz)	Standard deviations	% RSD
Hydrogel	10.48	0.484	4.6%
Hybrid hydrogel	15.04	0.384	2.6%

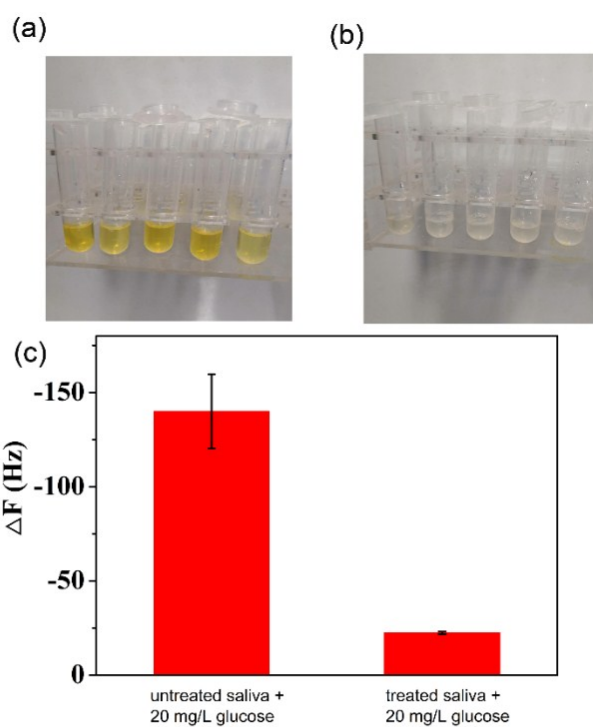


Figure S7. (a) The untreated saliva, (b) The treated saliva, and (c) Response of hybrid hydrogel-coated QCM sensor to 20 mg/L glucose in human saliva

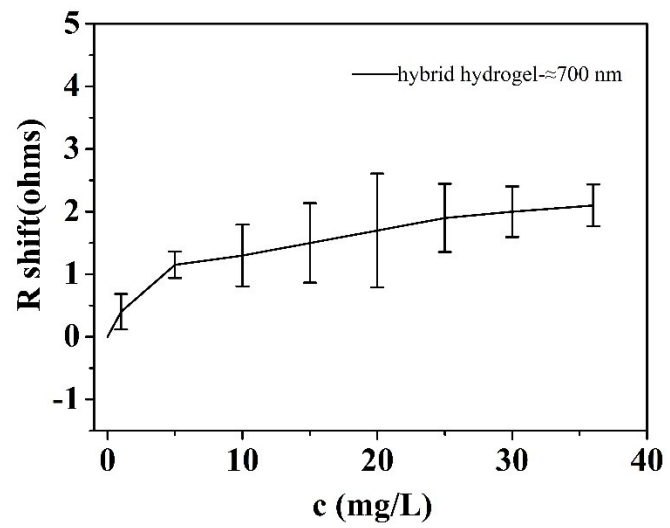


Figure S8. The R shift of hybrid hydrogel vs 0–36 mg L<sup>-1</sup> glucose level at thickness of 700 nm.