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# Support Information

## Electrospun fibrous platform for visualizing the critical pH point inducing tooth demineralization

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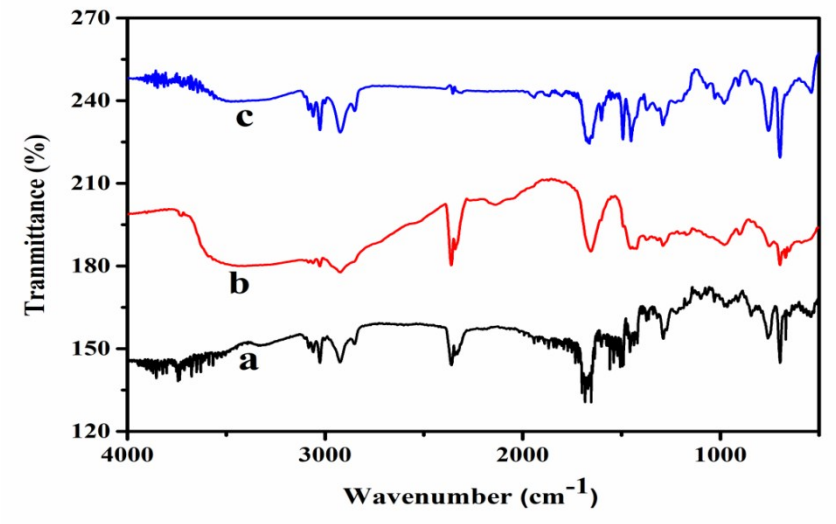


Fig. S1. FTIR spectra of PS/PVP fibrous membranes (a), PS/PVP fibrous membranes after plasma treatment (b), BCG-PS/PVP fibrous membranes (c).

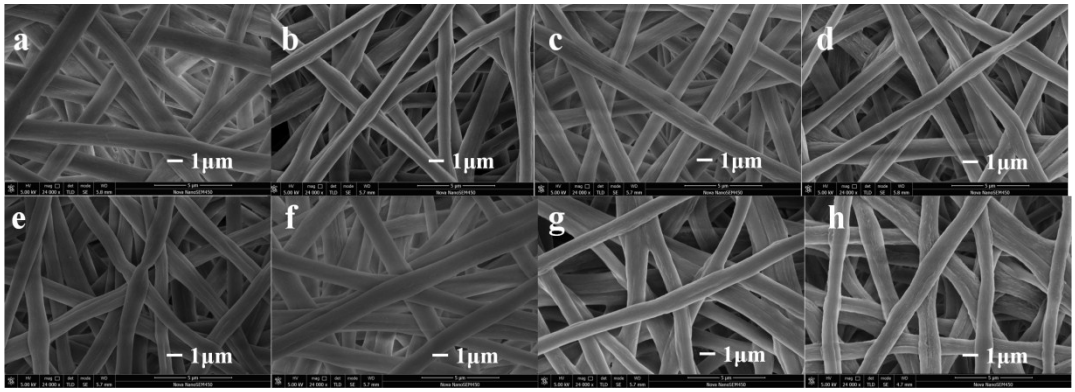


Fig. S2. The SEM images of (a) BCG-PS/PVP, (b) BCG-PS/PVP (pH 3.5), (c) BCG-PS/PVP (pH 4.0), (d) BCG-PS/PVP (pH 4.5), (e) BCG-PS/PVP (pH 5.0), (f) BCG-PS/PVP (pH 5.5), (g) BCG-PS/PVP (pH 6.0) and (f) BCG-PS/PVP (pH 7.0).

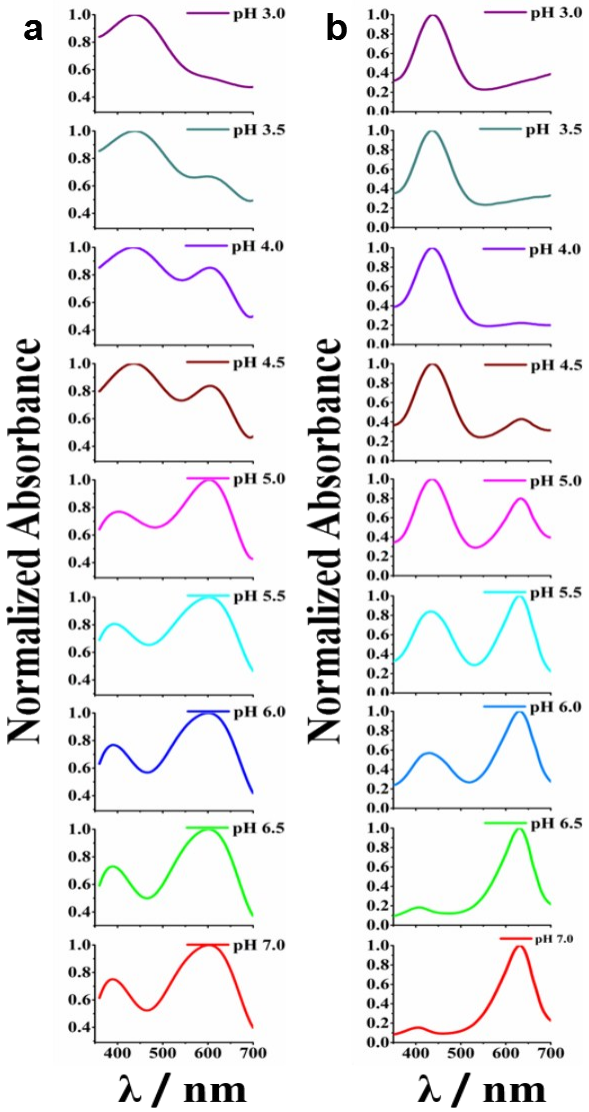


Fig. S3. Absorption spectra for 0.4 g/L BCG in solution (a) and BCG-PS/PVP fibrous

membrane (b) at different pH buffers.

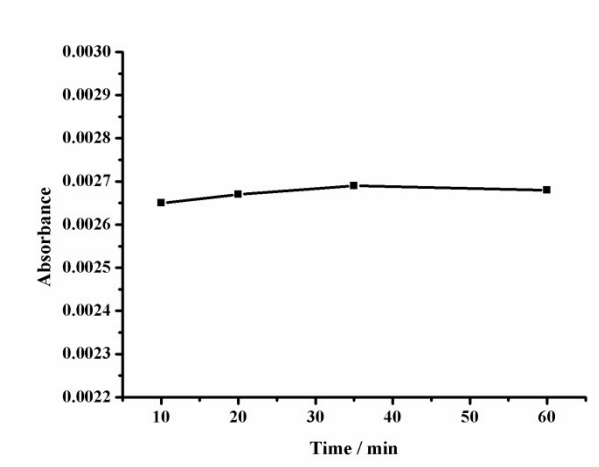


Fig. S4. The relationship of UV absorption intensity of BCG with immersion time.

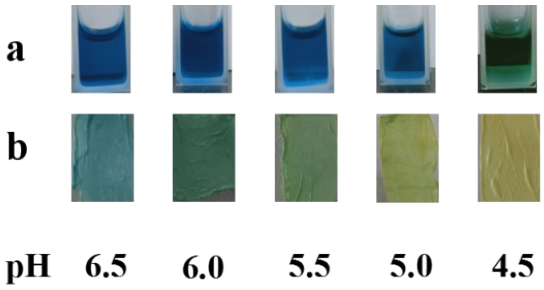


Fig. S5. Colorimetric pH-response performance of free BCG (a) and BCG-PS/PVP (b).

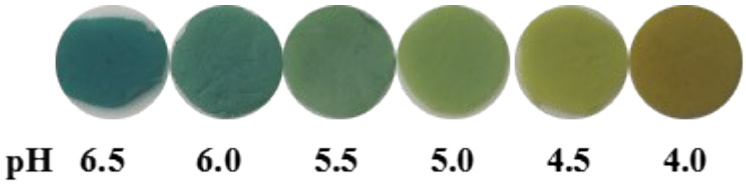


Fig. S6. Color comparison of BCG-PS/PVP fibrous membrane with different pH BHI

broth solutions.

**Table S1 Comparison of the BCG-PS/PVP fibrous membrane and mini pH detector**

| mini pH sensor | type, company | volume | sample bulk | calibration step | extra requirement |
|---|---|---|---|---|---|
| | TS-1, BUKER, China | large | ~ mL | necessary | power supply system |
| | B-712, HORIBA, Japan | large | ≧50 μL | necessary | power supply system |
| | this work | tiny | 50 μL | unnecessary | None |