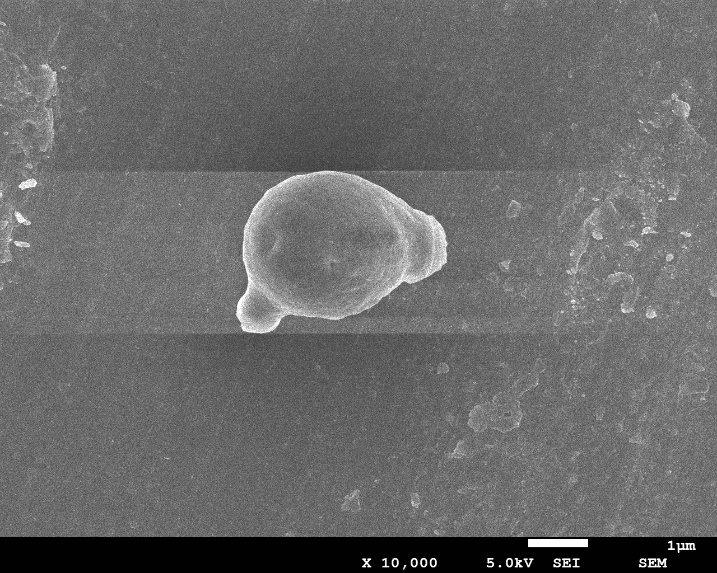
S1 Figure. The phenomenon of the *Plodia interpunctella* (Hübener) biting PE.



**Figure S1.** *Plodia interpunctella* (Hübener) biting PE

S2 Figure. The SEM image of ZJH-1.



**Figure S2.** The SEM image of ZJH-1

S3 Figure. FT-IR spectra before and after Cr (VI) treatment by ZJH-1.



**Figure S3.** FT-IR spectra before and after Cr (VI) treatment by ZJH-1, Ⅰ: untreated Ⅱ: treated

S4 Figure. Effect of temperature on CChR activity.



**Figure S4.** Effect of temperature on CChR activity

S5 Figure. Effect of pH on CChR activity.



**Figure S5.** Effect of pH on CChR activity

S6 Figure. Effect of different metal ions on CChR activity.



**Figure S6.** Effect of different metal ions on CChR activity

S7 Figure. CChR's kinetic curve

**Figure S7.** CChR's kinetic curve

S1 Table. The groups corresponding to each characteristic peak.

**Table S1.** Comparison table of characteristic peaks of

each group before and after ZJH-1 treatment of Cr (VI)

|  |  |
| --- | --- |
| **Wavelength (cm-1)** | **Tensile mode and belonging structure of telescopic vibration peak** |
| 3305 | -CH and -OH telescopic vibration zone |
| 3280 | -OH, -NH and -CH telescopic vibration zone |
| 2927 | -CH telescopic vibration zone includes -CH3 and CH2 |
| 2363 | -NH amide region |
| 1740 | -C = O telescopic vibration zone-COOH |
| 1647 | Amide I |
| 1546 | Amide Ⅱ |
| 1313 | -CN telescopic vibration zone |
| 1035 | -CN telescopic vibration zone, P-O alkyl |

S2 Table. Reduction of 50 mg·L-1 Cr (VI) by various components of cells.

**Table S2.** Reduction of 50 mg·L-1 Cr (VI) by various components of cells

|  |  |
| --- | --- |
| Cell component | Cr (VI) reduction rate % |
| Resting cell | 56.7±0.09 |
| Permeable cell | 60.4±0.11 |
| A1 | 70.0±0.02 |
| A2 | 10.0±0.02 |
| A3 | 3.9±0.03 |
| A1+NADH | 100±0.01 |
| A2+NADH | 15.5±0.02 |
| A3+NADH | 4.2±0.01 |