

Supporting materials for:

**Lignin Promoted the Fast Formation of Robust and Highly Conductive Deep  
Eutectic Solvent Ionic Gel at Room Temperature for Flexible Quasi-Solid-State  
Supercapacitor and Strain Sensors**

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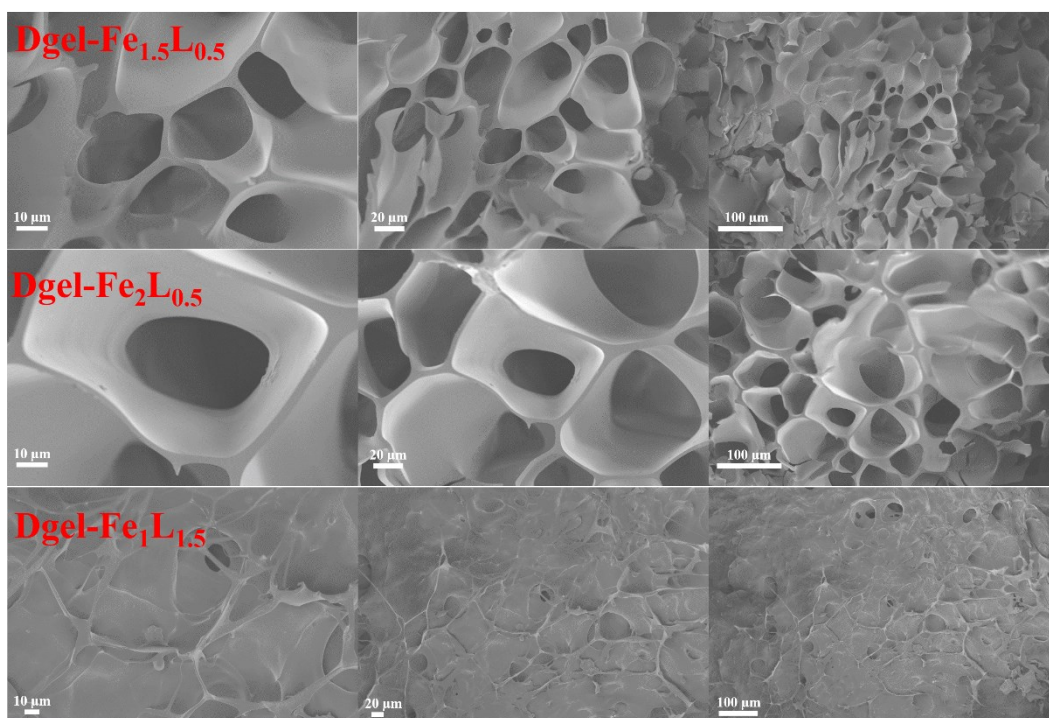
**Figure S1.** Digital photo after reaction without lignin.



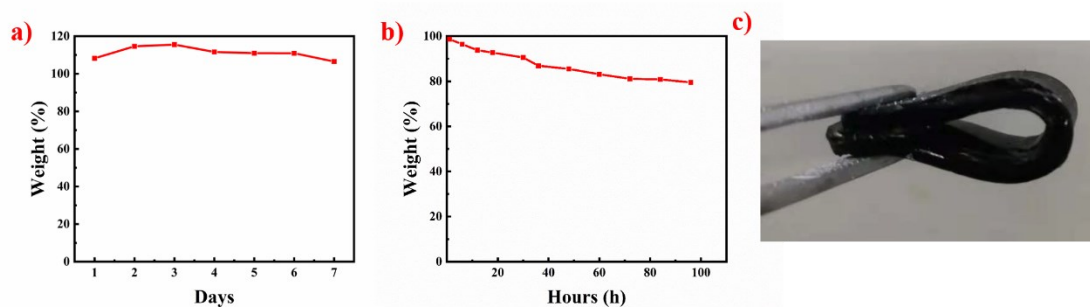
**Figure S2.** Digital photos of DGe-Fe<sub>1</sub>L<sub>0.5</sub> before stretching (a) and after stretching (b),

c) Digital photos of DGe-Fe<sub>1</sub>L<sub>1.5</sub> after stretching.



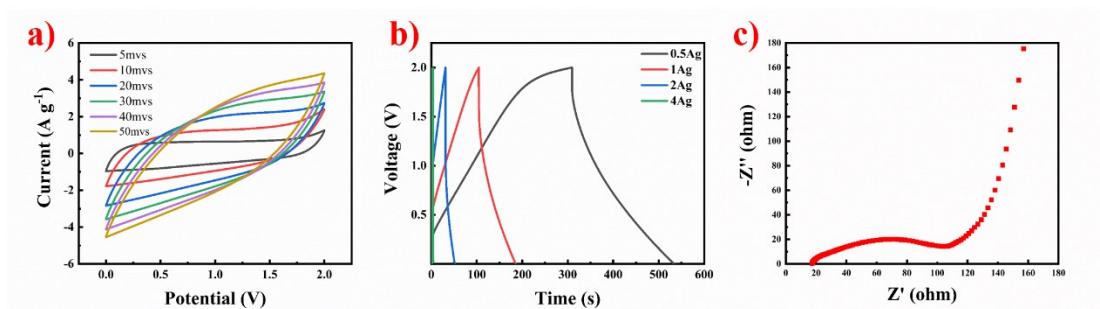


**Figure S3.** SEM of DES gel with different lignin and  $\text{Fe}_2(\text{SO}_4)_3$  contents.

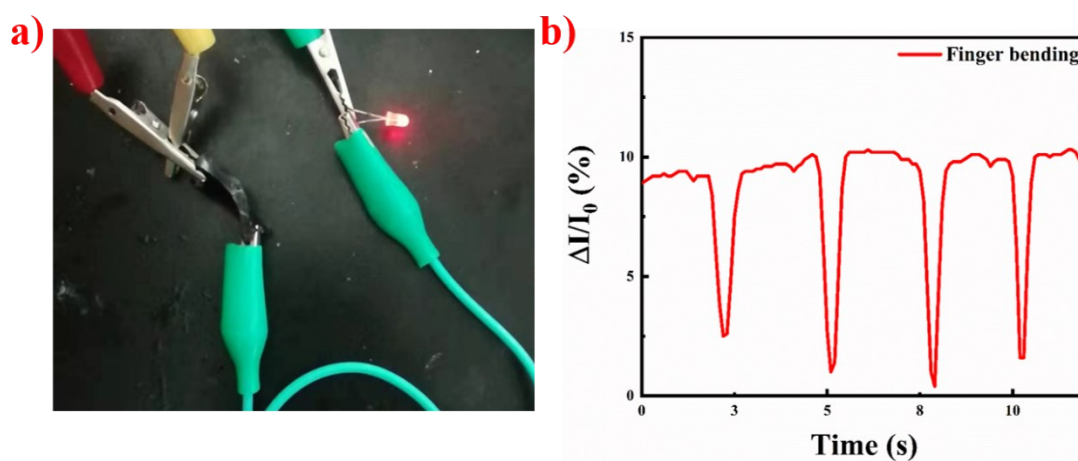


**Figure S4.** The weight change of the gel after being placed in the air (a) and in the 80 °C oven (b), c) Flexibility test after the gel was placed in the oven for 96 hours





**Figure S5.** Electrochemical performance of supercapacitors after adding potassium acetate.



**Figure S6.** Conductivity and sensing performance of gel at -20 °C.