

Electronic supplementary information

Simultaneous determination of epinephrine and uric acid at ordered mesoporous carbon modified glassy carbon electrode

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Raman spectrum of OMC

The existence of edge-plane-like defective sites of OMC can be demonstrated by Raman spectrum, as shown in Fig. S1. Two bands, located at 1340 and 1595 cm^{-1} , exhibiting the presence of D band and G band. The D band at around 1340 cm^{-1} is associated with the presence of defects in the graphite layer, arising from sp^3 -hybridized carbon. The peak at 1595 cm^{-1} is Raman-active E_{2g} , which is due to the vibration mode corresponding to the movement in opposite directions of two neighboring carbon atoms in a single crystal graphite sheet. According to the references 30 and 31, the relative intensity ratio of the D and G bands (I_D/I_G ratio) is proportional to the number of defect sites. The I_D/I_G ratio is calculated as 0.78, indicating that there are significant edge-plane-like defective sites existing on the surface of OMC. The result was in keeping with references 33 and 40.

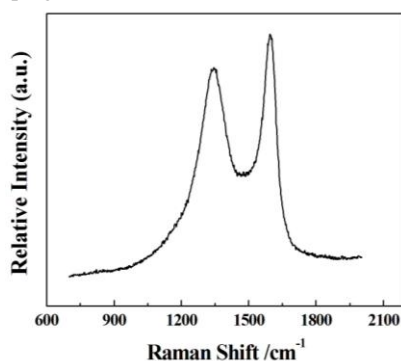


Fig. S1. Raman spectrum of OMC.

FTIR of OMC

The presence of the oxygen-containing groups on the surface of OMC can be confirmed by Fourier transform infrared spectroscopy (FTIR), as shown in Fig. S2. The band around 1680 cm^{-1} is assigned to C=O stretch vibration, the bands around 1550 cm^{-1} and 1480 cm^{-1} are attributed to COO⁻ stretch asymmetric vibration. The band around 1200 cm^{-1} is ascribed to O-H vibration, while the zone around 3448 cm^{-1} is responsible for carboxylic acid O-H stretch vibration. The result was consistent with that of references 35, 36 and 40.

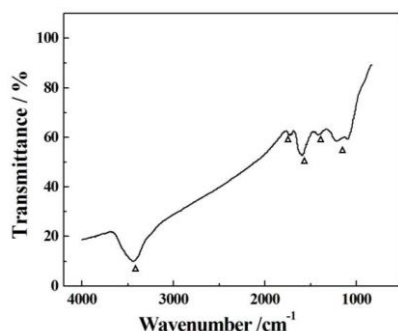


Fig. S2. FTIR of OMC

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