Supplementary Material

for

Effect of concentration of glycidol on the properties of Resorcinol-formaldehyde aerogels and carbon aerogels catalyzed by glycidol

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The Nitrogen adsorption/desorption isotherms analysis was performed on the RF aerogels and CAs to determine the BET specific surface area and pore size distribution. As shown in Fig. S1(a), the N_2 adsorption/desorption isotherms of RF aerogels and CAs exhibits type IV isotherms and H3 hysteresis loops, which reveals both RF aerogels and CAs have a large amount of mesopores and macropores. Additionally, the N_2 adsorption amount of RF aerogels and CAs, at the relative pressure of $P/P0 < 0.01$, displays a faster rise, indicating the RF aerogels and CAs have a large number of micropores. However, at the relative pressure of $P/P0 < 0.01$, the N_2 adsorption amount of CAs is about twice than that of RF aerogels, indicating the carbonization of RF aerogels produces a lot of micropores. The BET specific

surface area (derived from the N_2 adsorption curves) of RF aerogels and CAs are about 290 and 597 $m^2 \cdot g^{-1}$, which means they are high porosity materials. It is obviously observed that the carbonization of RF aerogels results in the remarkable improvement (about twice) of specific surface area of CAs, which could be ascribed to the evolving volatile of organic components of RF aerogels during the carbonization process and the generation of micropores. Fig.S1(b) shows the pore size distributions (derived from the N_2 desorption curves by DFT method) of RF aerogels and CAs. Although both the RF aerogels and CAs have micropores (less than 2 nm) and mesopores (between 2 and 50 nm), the amount of micropores of CAs is apparently larger than that of RF aerogels, which is agreement with the aforementioned results. It can be concluded the RF aerogels and CAs catalyzed by glycidol are low-density, high-specific-surface-area porous materials, which contains a large amount of micropores, mesopores and macropores.

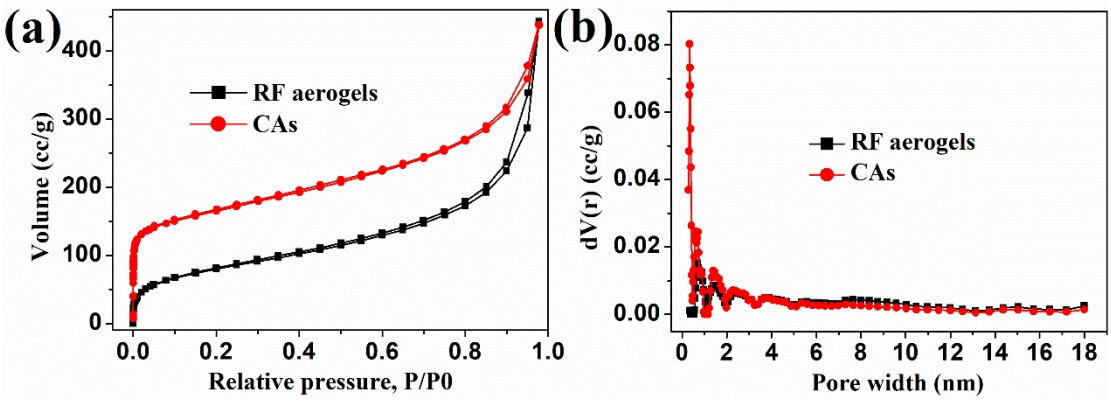

Fig.S1 (a) N_2 adsorption/desorption isotherms and (b) pore size distribution curves of RF aerogels and CAs(S5)