

*Supporting Information for*

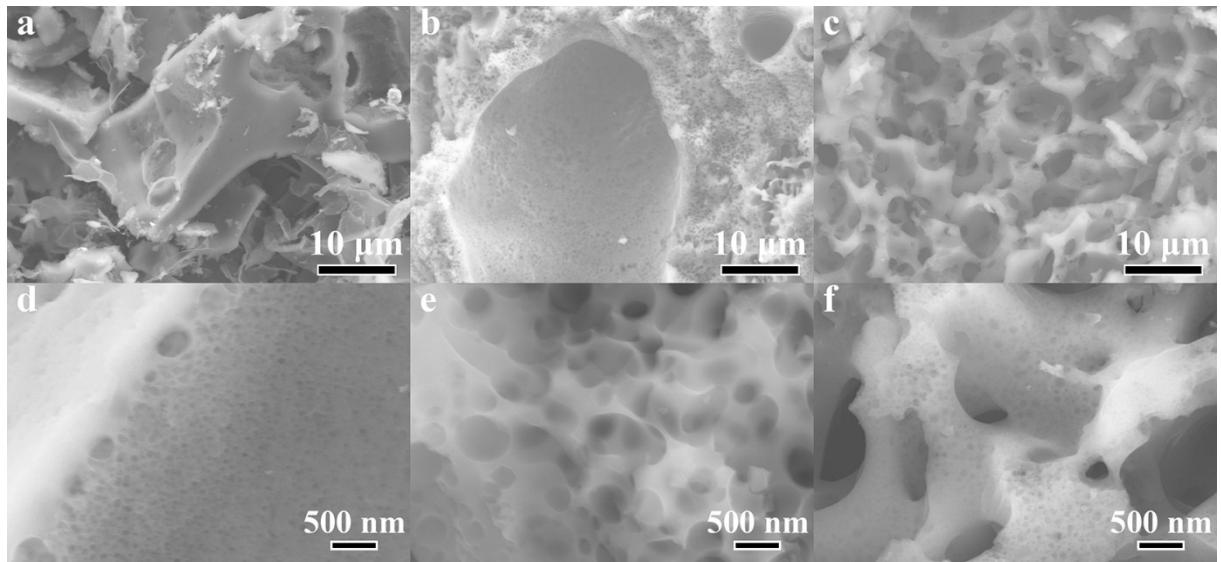
## **Hierarchically Porous Carbon with Controlled Structure for Efficient Microwave Absorption**

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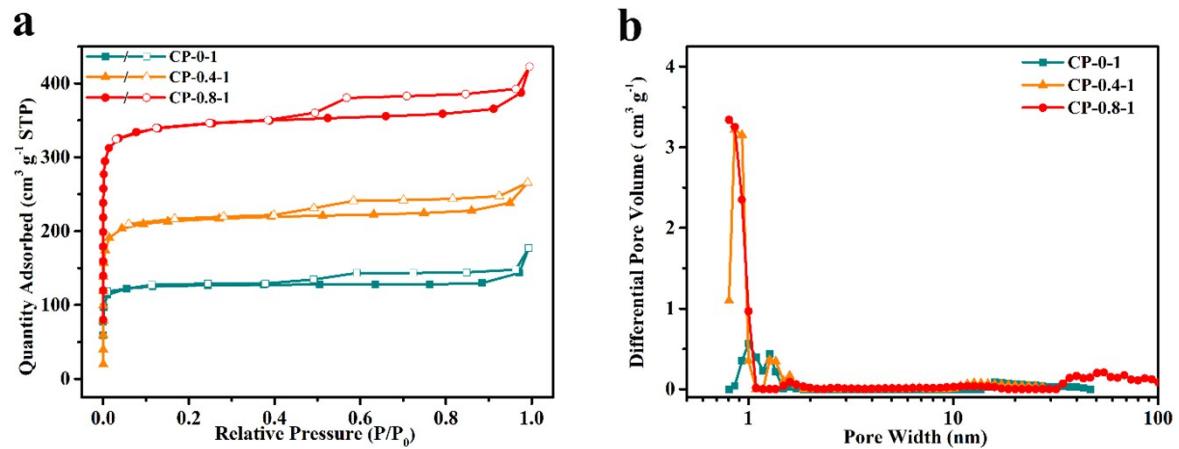
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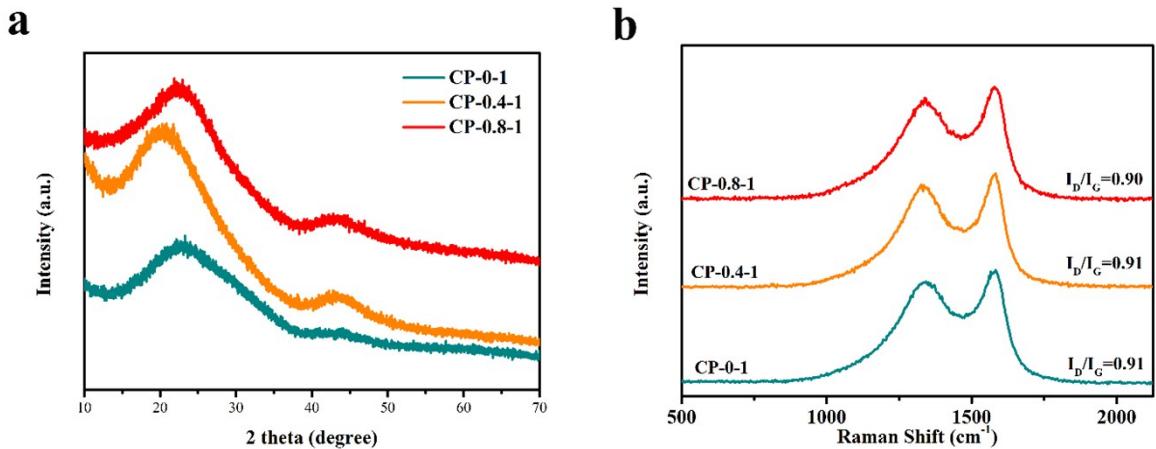
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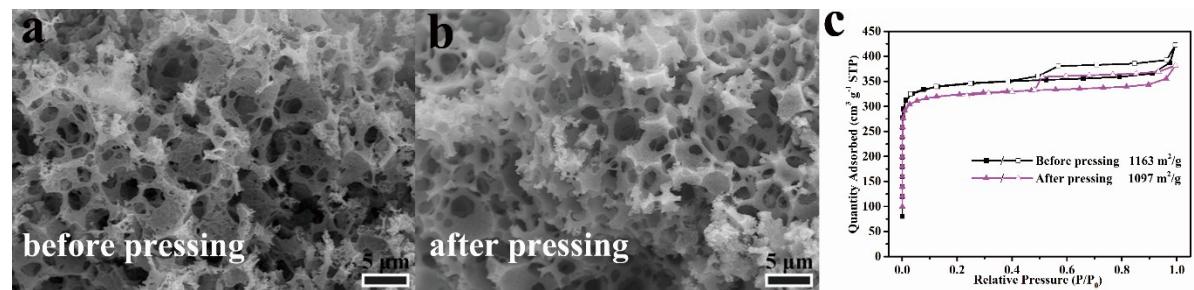
**Figure S1.** SEM images of (a and d) CP-0-1; (b and e) CP-0.4-1 and (c and f) CP-0.8-1.



**Figure S2.** (a) Nitrogen adsorption-desorption isotherms and (b) pore size distribution calculated using DFT method of CP-x-1.



**Figure S3.** (a) XRD patterns and (b) Raman spectra of CP-x-1 prepared using precursors with different water phase volume fractions.



**Figure S4.** The SEM figures (a and b) and N<sub>2</sub> absorption-desorption isotherms (c) of CP-0.8-1 before and after pressing procedure. The sample after pressing procedure is prepared by immersing the test sample of CP-0.8-1 in hexane to remove the paraffin. It is obvious that these two samples possess almost the same micro-sized porous structure and N<sub>2</sub> absorption-desorption isotherm (nano-sized porous structure), suggesting that the pressing process has negligible influence on the porous structure.

**Table S1.** MA performance of representative MA materials reported previously and CP-0.8-1

absorbents	thickness (mm)	RL <sub>max</sub> (-dB)	EAB (GHz)
Fe <sub>3</sub> O <sub>4</sub> /graphene <sup>1</sup>	3.5	-32.0	4.5
PPy@PANI-1.2 <sup>2</sup>	2.0	-34.8	4.7
RGO/MnFe <sub>2</sub> O <sub>4</sub> /PVDF <sup>3</sup>	3.0	-29.0	4.9
BaTiO <sub>3</sub> <sup>4</sup>	2.0	-21.8	1.8
C@Fe@Fe <sub>3</sub> O <sub>4</sub> <sup>5</sup>	1.5	-40.0	5.2
Fe <sub>3</sub> O <sub>4</sub> -graphene <sup>6</sup>	4.5	-40.0	2.3
TiO <sub>2</sub> <sup>7</sup>	4.0	-36.9	1.0
Fe/C <sup>8</sup>	2.0	-22.6	5.3
CP-0.8-1 (this work)	2.46	-56.4	6.0

## References

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