Core-Shell Carbon-Ceramic Fibrous Aerogel Derived from Aramid-Polysilsesquioxane for Broadband Electromagnetic Wave Absorption

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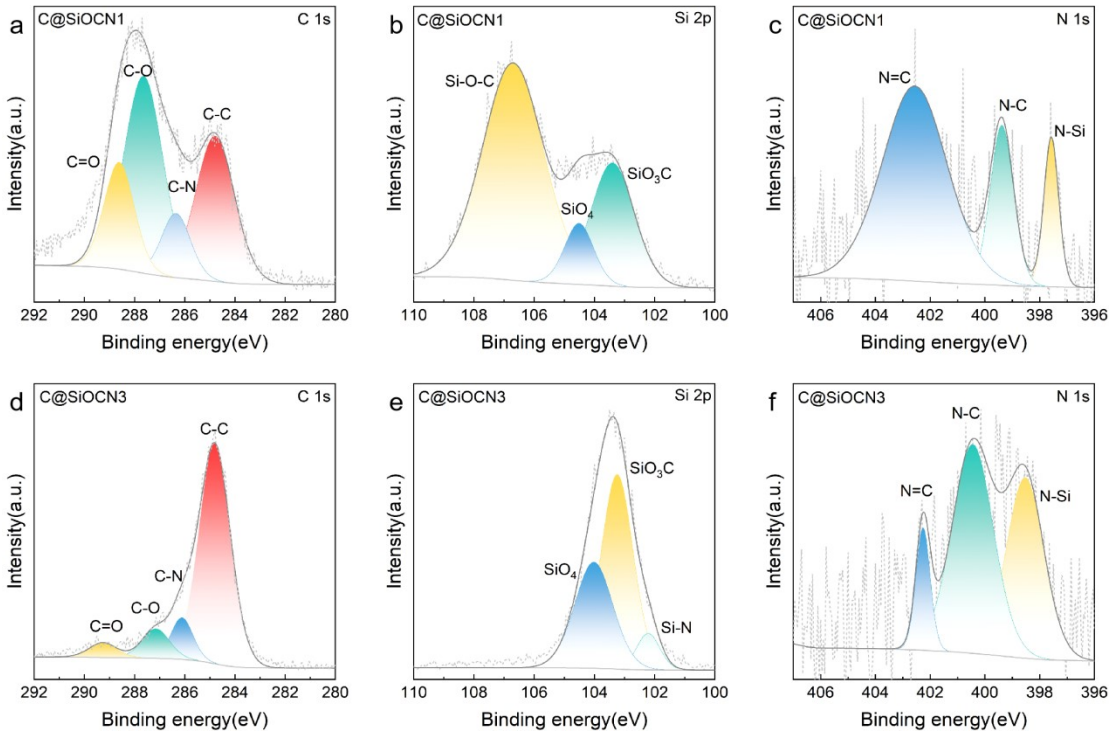

Figure S1. High-resolution XPS spectra for (a,d) C 1s, (b,e) Si 2p and (c,f) N 1s of C@SiOCN1 and C@SiOCN3 aerogels.

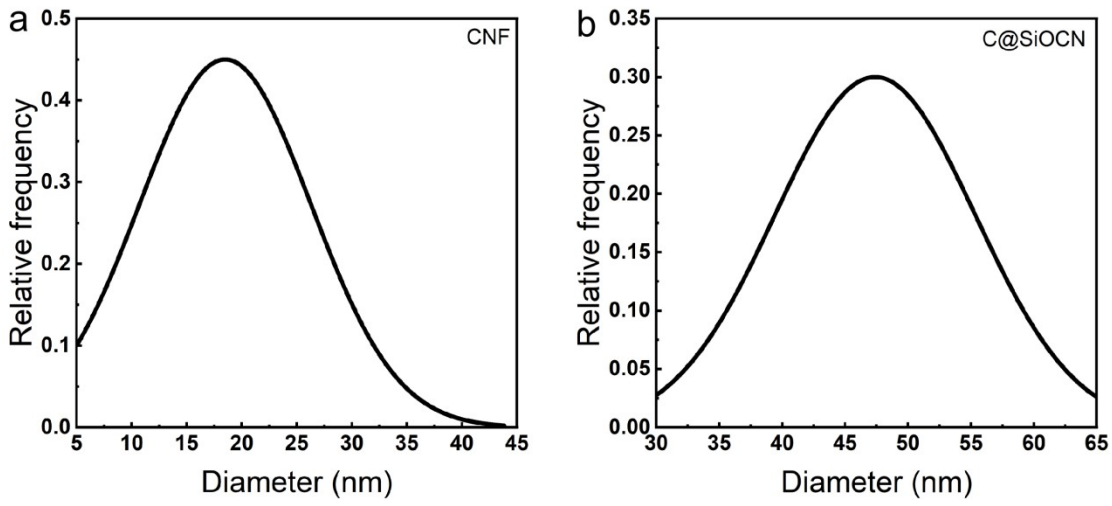

Figure S2. Diameter statistical distribution images of nanowires in (a) CNF and (b) C@SiOCN.

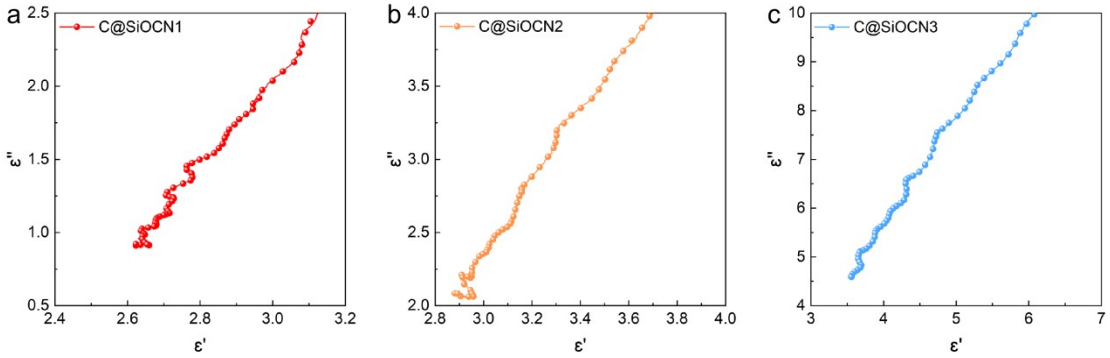

Figure S3. Enlarged images of the low-frequency region in the Cole-Cole curve for the (a) C@SiOCN1, (b) C@SiOCN2 and (c) C@SiOCN3 aerogel.

Table S1. Comparison of the microwave absorption performance of the previously reported carbon-ceramic based absorbers.

Materials	Thickness/mm	EAB/GHz	Refs.
SiC aerogel	3.3	6.7	S1
SiC aerogel	3.75	5.5	S2
SiC aerogel	3.59	6.24	S3
SiC-based nanofibrous aerogel	2.8	4.5	S4
C/SiC nanofiber aerogel	3	4.8	S5
SiC/Si_3N_4 aerogel	2	7.4	S6
SiC fiber aerogel	2.4	7.2	S7
SiBCN/Al_2O_3 aerogel	2.2	5.8	S8
SiBCN/SiBCN nano fiber aerogel	2	5.6	S9
SiBCN/SiC nanowire aerogel	2	6.4	S10
C/SiC/SiBCN composite aerogel	2	5.3	S11
SiOCN ceramic aerogel	2.15	5.4	S12
SiCN ceramic aerogel	4	3.8	S13
SiOC ceramic aerogel	2.45	6	S14
C/SiOC composite aerogel	2.37	6.88	S15
C/SiOC aerogel	2	4.92	S16
C@SiOCN aerogel	3.45	8.24	This work

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