Electronic Supplementary Information

A new exploration: porous-carbon-based Mo_2C nanocomposites as the excellent microwave absorber

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Table S1. The contents of Mo and Cu elements in the composites.

Samples	Element	Content (wt%)	n_{Cu}/n_{Mo}
Mo-800	Mo	59.54%	0.0017
	Cu	0.07%	
Mo-900	Mo	48.20%	0.0040
	Cu	0.13%	
Mo-1000	Mo	40.93%	0.0234
	Cu	0.64%	

(Data was detected and calculated from the result of ICP)

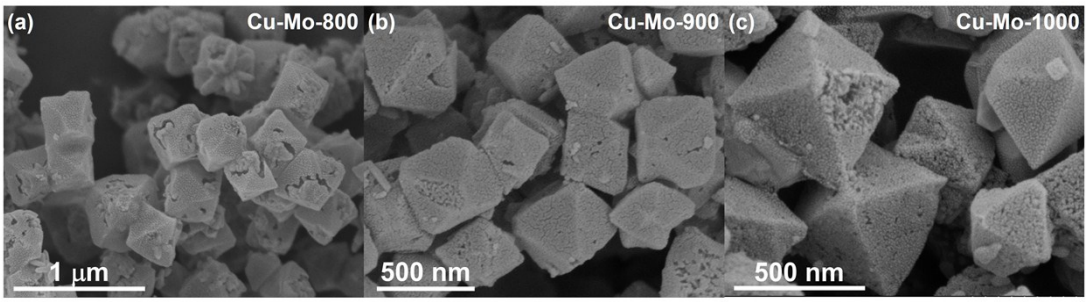

Figure S1. The SEM images of Cu-Mo-800, Cu-Mo-900 and Cu-Mo-1000, respectively.

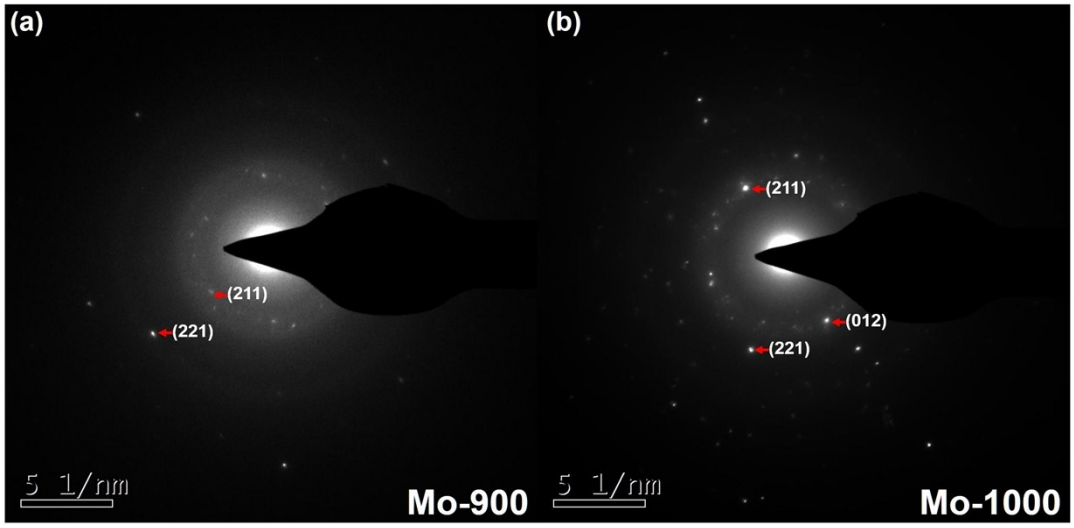

Figure S2. The SAED images of Mo-900 (a) and Mo-1000 (b).

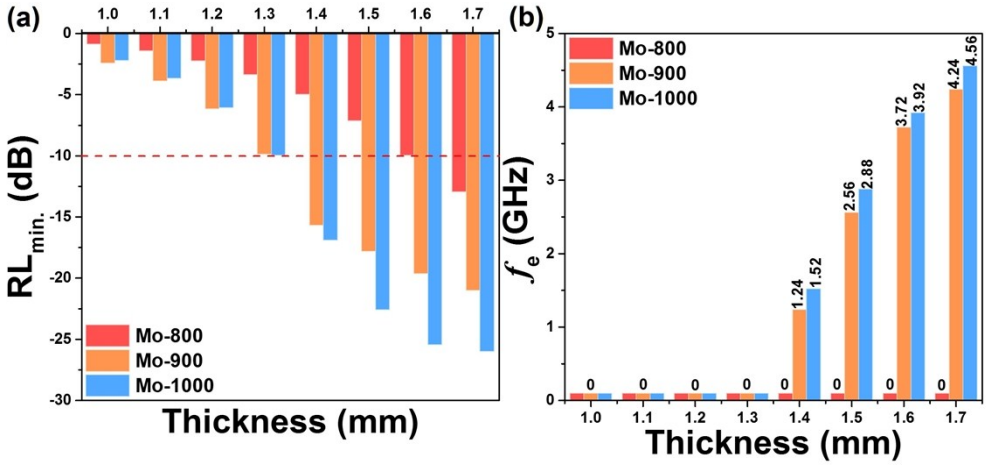

Figure S3. The reflection loss (RL) values of sample-paraffin (20 wt%) nanocomposites with the thickness from 1.0 to 1.7 mm; the effective bandwidth (f_e) (<-10 dB) of the samples.

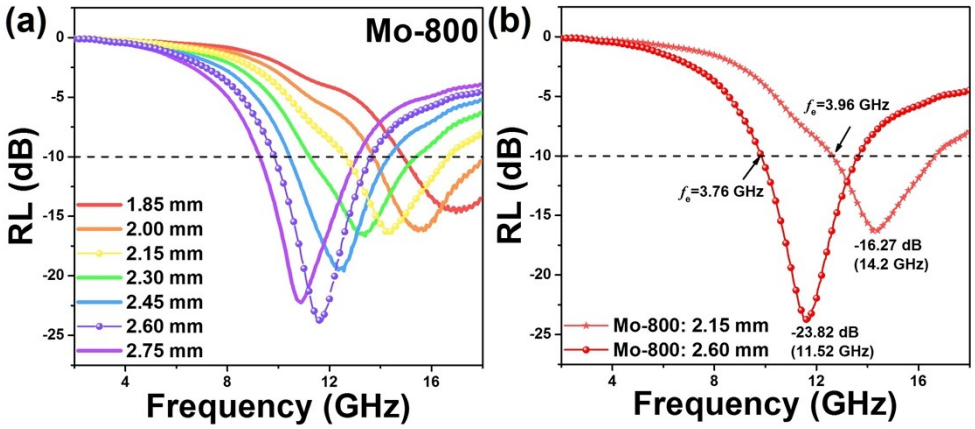

Figure S4. The reflection loss (RL) values of Mo-800 of sample-paraffin (20 wt%) nanocomposites (a); (b) the RL values of Mo-800 with the thickness of 2.15 and 2.60 mm.

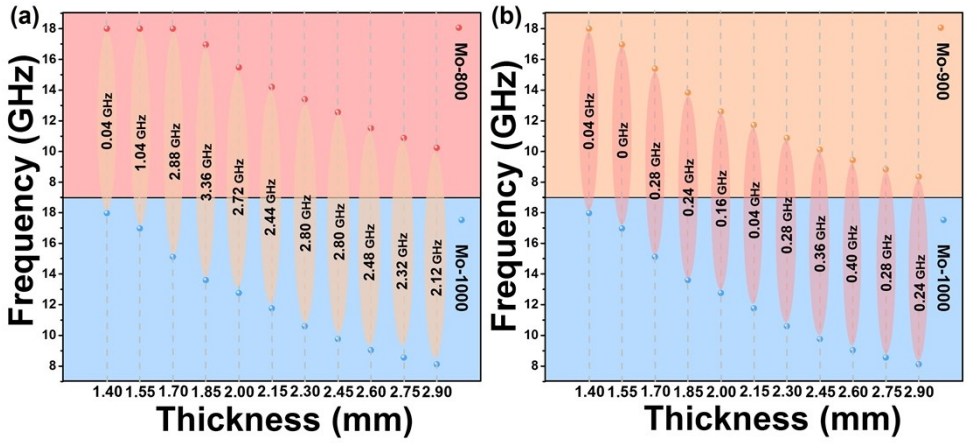

Figure S5. The shift of $RL_{min.}$ value with 20 wt% paraffin nanocomposites between Mo-800 and Mo-1000 (a) as well as between Mo-900 and Mo-1000 (b).

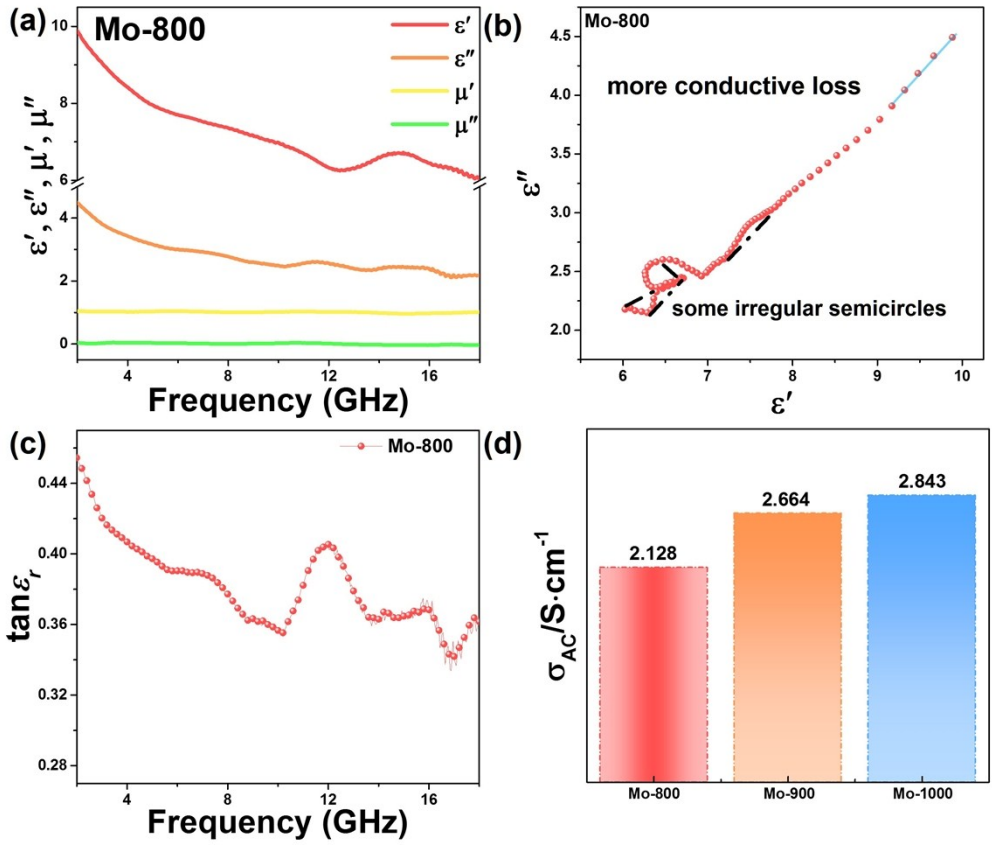

Figure S6. Measured frequency dependence of the permittivity and permeability of sample-paraffin (20 wt%) nanocomposites (a); Cole-Cole plots of Mo-800 (b); (c) Frequency dependence of dielectric loss of Mo-800 and Mo-1000 with 20 wt% paraffin nanocomposites; (d) the calculated conductivities of the samples.

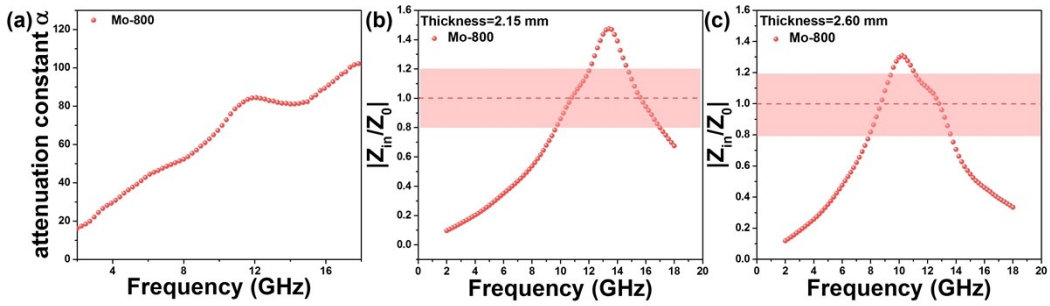

Figure S7. Attenuation constant α of the samples (a); The $|Z_{in}/Z_0|$ values of Mo-800/paraffin (20 wt%) nanocomposites with thickness of (b) 2.15 mm and (c) 2.60 mm.