**Supplementary Information:**

**Absorption properties and mechanism of lightweight and broadband electromagnetic wave absorbing porous carbon by swelling treatment**

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Fig. S1. Raman spectra of HPC-1, HPC-2, and HPC-3.



Fig. S2. The RLmin curves for HPC600-4 (a), HPC700-4 (b), and HPC750-4 (c).



Fig. S3. Real part (a) and imaginary part (b) of complex permittivity of HPCT-4.

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