**Supplementary Information:**

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

*Jianghao Wen*1), *Di Lan*2), *Yiqun Wang*1),[[1]](#footnote-1)🖂, *Lianggui Ren*1), *Ailing Feng*4), *Zirui Jia*3), *and Guanglei Wu*3),🖂

1) College of Materials and Chemistry & Chemical Engineering, Chengdu University of Technology, Chengdu 610059, China

2) School of Materials Science and Engineering, Hubei University of Automotive Technology, Shiyan 442002, China

3) Institute of Materials for Energy and Environment, State Key Laboratory of Bio-fibers and Eco-textiles, College of Materials Science and Engineering, Qingdao University, Qingdao 266071, China

4) Institute of Physics & Optoelectronics Technology, Baoji University of Arts and Sciences, Baoji 721016, China

(Received: 5 September 2023; revised: 9 March 2024; accepted: 13 March 2024)



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.

1. 🖂 Corresponding authors: Yiqun Wang E-mail: [wangyiqun17@cdut.edu.cn](mailto:wangyiqun17@cdut.edu.cn); Guanglei Wu E-mail:wuguanglei@qdu.edu.cn, wuguanglei@mail.xjtu.edu.cn [↑](#footnote-ref-1)