

Supporting Information

CoZnO/C@BCN nanocomposites derived from bimetallic hybrid

ZIFs for enhanced electromagnetic wave absorption

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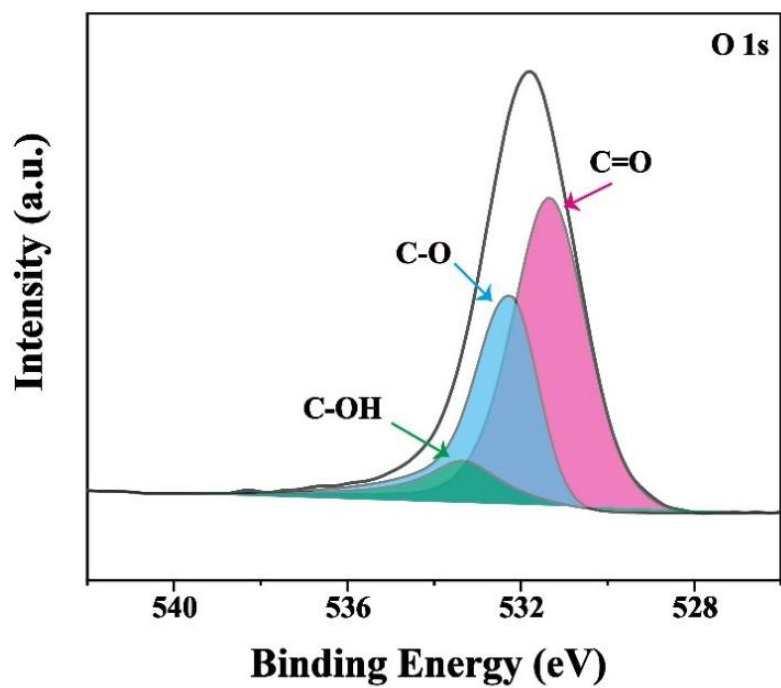


Fig. S1 XPS spectra of O 1s spectrum of Co₁Zn₁O/C@BCN

In general, the relative permeability of the conductor is equal to 1 ($\mu=1$), and since the skin depth δ is inversely proportional to the square root of the frequency as following^[1, 2].

$$\delta = \frac{1}{\sqrt{\pi f \mu \sigma}}$$

where σ is the electrical conductivity, μ is the magnetoconductivity, f is frequency.

The skin depth is large at low frequencies and rapidly decreases as the frequency increases. The variation of skin depth of the nanocomposite with frequency can be obtained by bringing the data into the above formula, as shown in Fig. S2.

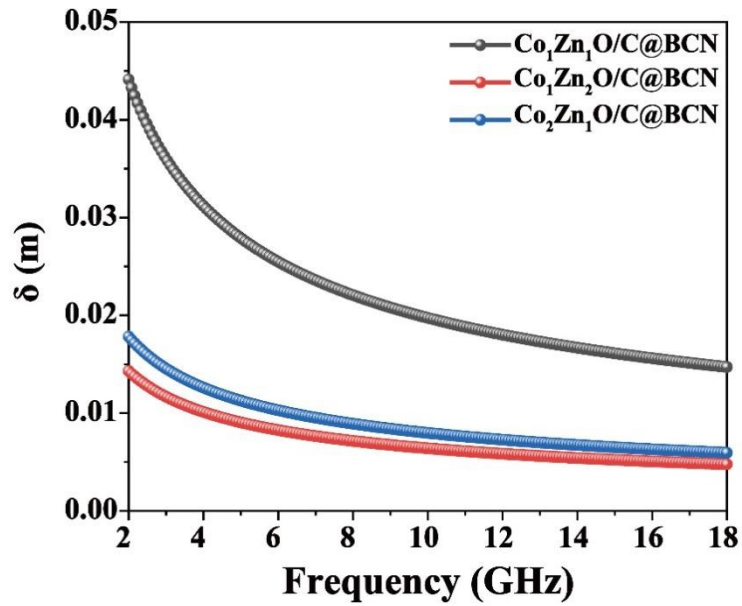


Fig. S2 The skin-depth of CoZnO/C@BCN nanocomposites varies with frequency

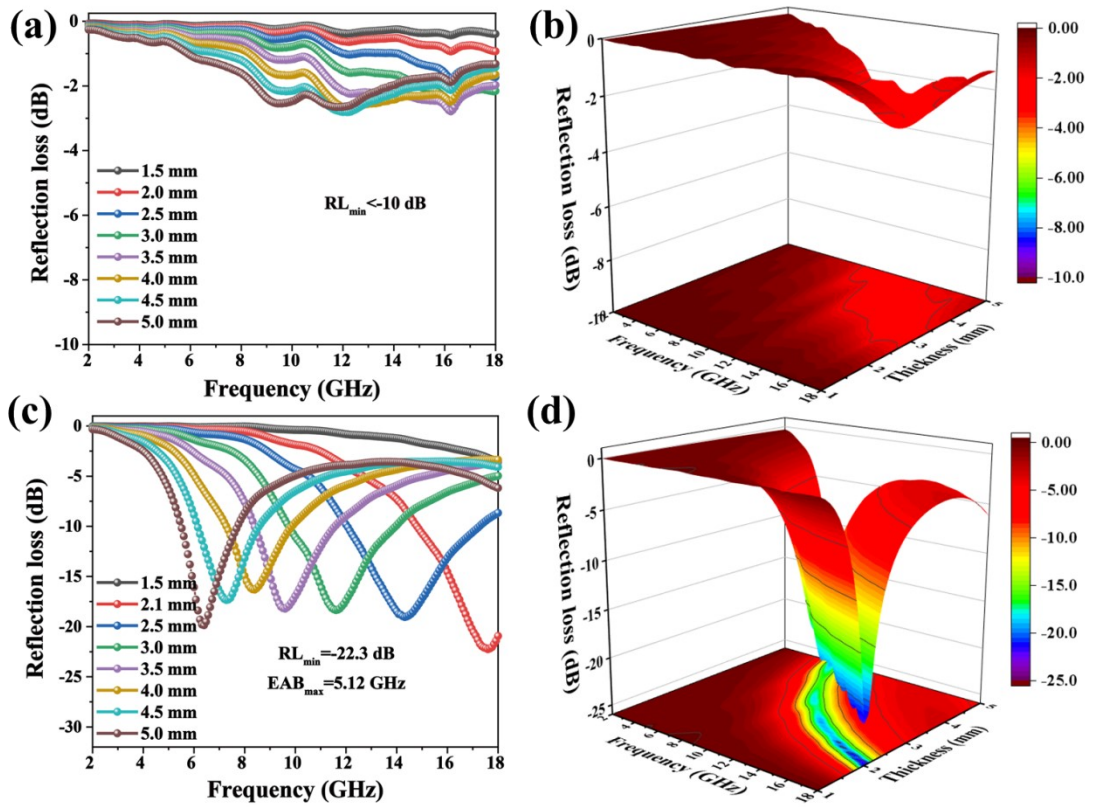


Fig. S3 Frequency dependence of RL values at different thicknesses for (a, b) ZIF-L(Zn)/BCN, (c, d) ZIF-L(Co)/BCN

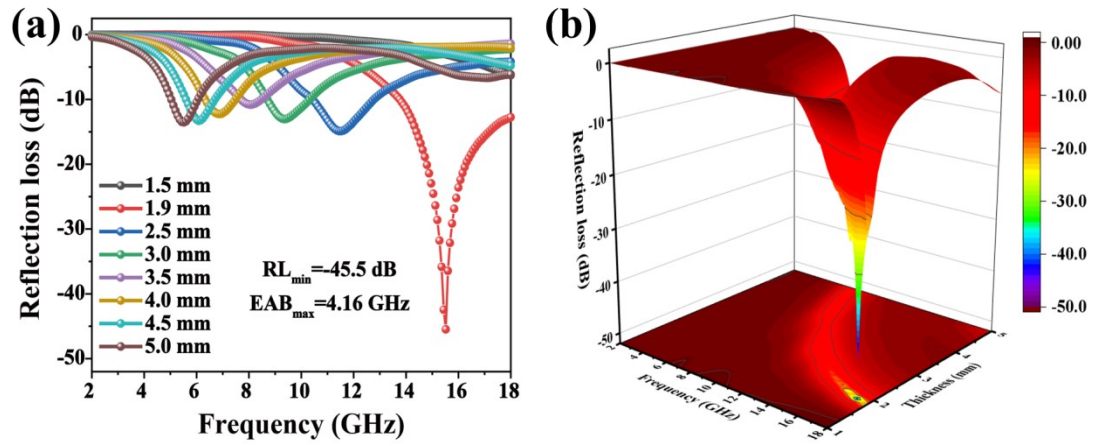


Fig. S4 Frequency dependence of RL values at different thicknesses for (a, b) ZIF-L(Zn)

References

1. J. Prasad, A. K. Singh, K. K. Haldar, M. Tomar, V. Gupta and K. Singh, *RSC Advances*, 2019, **9**, 21881-21892.
2. J. Prasad, A. K. Singh, M. Tomar, V. Gupta and K. Singh, *Ceramics International*, 2021, **47**, 15648-15660.