# Symmetrical polyhedron-bowl $\mathbf{C o} / \mathrm{CoO}$ with hexagonal plate to forward electromagnetic wave absorption ability 

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Figure S1 The FT-IR spectrum of the symmetrical polyhedron-bowl Co polyhedrons


Figure S2 XRD curve of the products after TGA analysis


Figure S3 XRD profiles of Co samples prepared at various contents of distilled water ( $0 \mathrm{~mL}, 1 \mathrm{~mL}, 3 \mathrm{~mL}, 5 \mathrm{~mL}$ and 10 mL ).


Figure S4 (a, b) SEM images of products prepared with $\mathrm{CoC}_{2} \mathrm{O}_{4}$ as Co source; (c, d) SEM images of products prepared with $\mathrm{Co}\left(\mathrm{NO}_{3}\right)_{2}$ as Co source.


Figure S5 XRD patterns of products prepared at different reaction times (1 h, $3 \mathrm{~h}, 7 \mathrm{~h}$, 11 h and 15 h ).


Figure S6 (a) TEM image, and (b) an illustration of growth mechanism of the symmetrical polyhedron-bowl Co polyhedrons.


Figure S7 Microwave absorption properties of paraffin/50 wt\% Co based products with different shapes prepared at various distilled water contents and temperatures.


Figure S8 The $\mathrm{C}_{0}\left[\mu^{\prime \prime}\left(\mu^{\prime}\right)^{-2} f^{-1}\right]$ values of the symmetrical polyhedron-bowl Co/CoO paraffin composites as a function of the frequency.

