SUPPLEMENTARY INFORMATION

A calcium-copper-based zeolite with dual functions of hemostatic and antibacterial properties

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Supplementary Figures



Fig. S1 SEM images of (a) NaP, (b) NaY, (c) NaX, (d) NaA.



Fig. S2 Particle diameter distribution diagrams of NaZ and the corresponding CaCuZ materials (copper ion exchange concentration: 0.01 M).

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Fig. S3 Zeta potential of NaZ and the corresponding CaCuZ materials (copper ion exchange concentration: 0.01 M).



Fig. S4 Photographs of E. coli colonies treated with CaCuP, CaCuY, CaCuX, and CaCuA fabricated with copper ion exchange solution of different concentrations.

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Fig. S5 Photographs of S. aureus colonies treated with CaCuP, CaCuY, CaCuX, and CaCuA fabricated with copper ion exchange solution of different concentrations.



Fig. S6 SEM images of (a) E. coli and (b) S. aureus treated with CaZ and different CaCuZ materials with a copper content of 6.30 mg g⁻¹, respectively.

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Supplementary Table

Table S1 Silica and aluminum content of NaZ materials.

Material	Si/wt%	Al/wt%	Si/Al
NaP	13.80	6.68	1.99
NaY	20.80	6.23	3.22
NaX	13.20	8.58	1.48
NaA	13.50	7.84	1.66

 Table S2 Specific surface area and pore volume of different NaZ materials.

Material	Specific surface area (m ² /g)	Pore volume (cm ³ /g)
NaP	27.2	0.071
NaY	864.4	0.031
NaX	643.0	0.029
NaA	21.2	0.13