Supplementary Materials

Table S1.Structural properties of some natural zeolite

Zeolite	Chemical formula	Framework structure	Crystalline system
Clinoptilolite	$(K_2,Na_2,Ca)_3Al_6Si_{30}O_{72}\cdot 21H_2O$	HEU	Monoclinic
Mordenite	$Na_8Al_8Si_{40}O_{96}\cdot 24H_20$	MOR	Orthorhombic
Chabazite	$Ca_6Al_{12}Si_{24}O_{72}\cdot 40H_2O$	CHA	Rhombohedral
Phillipsite	$K_2,(Ca,Na_2)_2Al_6Si_{10}O_{32}\cdot 12H_2O$	PHI	Monoclinic
Analcime	$Na_{16}Al_{16}Si_{32}O_{96}\cdot 16H_2O$	ANA	Cubic
Scolecite	$Ca_4Al_8Si_{12}O_{40}\cdot 12H_2O$	NAT	Monoclinic
Erionite	$(Ca,Na_2)_{3.5}K_2Al_9Si_{27}O_{72}\cdot 27H_2O$	ERI	Hexagonal

Table S2.Structural properties of some synthetic zeolite

Zeolite	Chemical formula	Framework structure	Crystalline system
X	$Na_{58}Al_{58}Si_{134}O_{384}\cdot 240H_2O$	FAU	Cubic
Y	$Na_{58}Al_{58}Si_{134}O_{384}\cdot 240H_2O$	FAU	Cubic
A	$Na_{96}Al_{96}Si_{96}O_{384}\cdot 216H_2O$	LTA	Cubic
ZSM-5	$Na_nAl_nSi_{96-n}O_{192}\cdot 16H_2O$, n < 27	MFI	Orthorhombic
ZSM-11	$Na_nAl_nSi_{96-n}O_{192}\cdot 16H_2O$, n < 16	MEL	Tetragonal
Beta	$Na_7Al_7Si_{57}O_{128}$	BEA	Tetragonal
ZK-5	$Na_{30}Al_{30}Si_{66}O_{192}\cdot 98H_2O$	KFI	Cubic

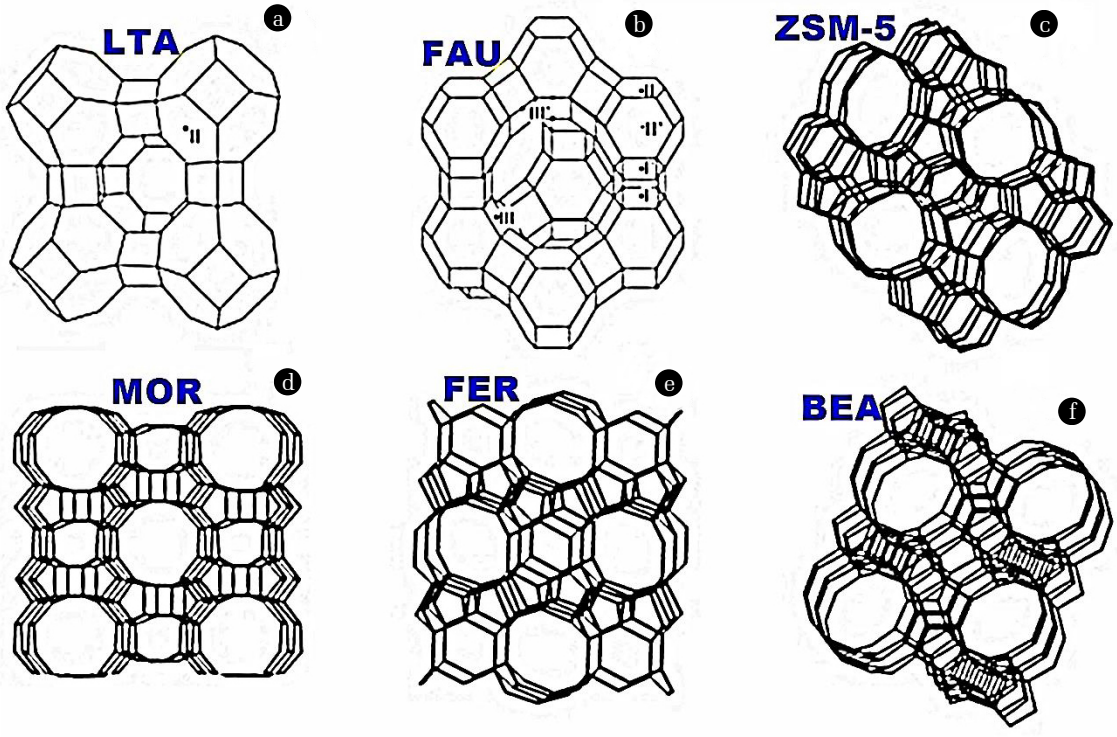

Fig. S1. Table S1 (inset) structural properties of some natural zeolite; Table S2 (inset) structural properties of some synthetic zeolite; (A-F) Different frameworks of zeolites, reprinted with the permission from [1] Copyright © 2010, American Chemical Society.

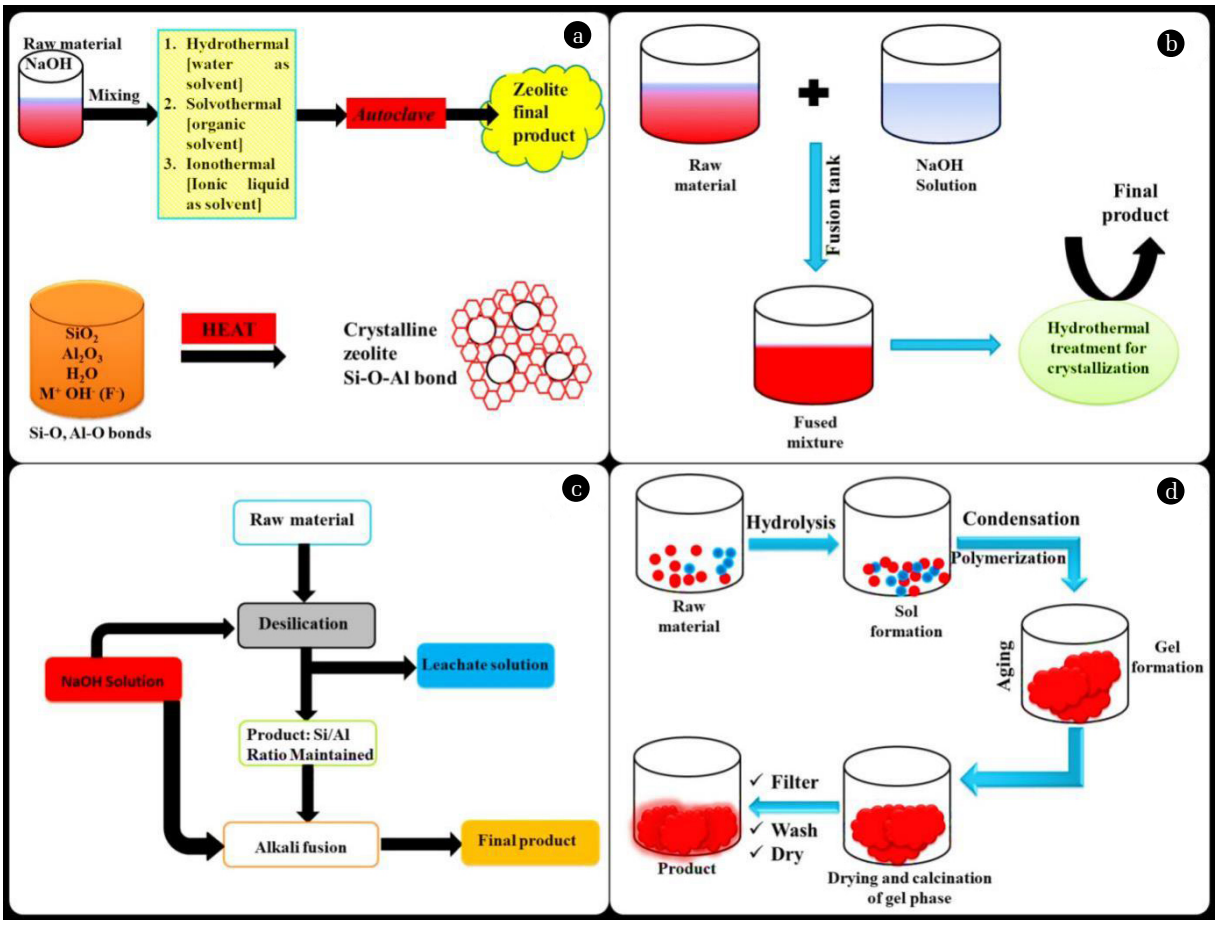

Fig. S2. Schematic representation of synthesis method of zeolite (a) Hydrothermal, Solvothermal, and Ionothermal, (b) Alkali fusion method, (c) Alkali leaching, and (d) Sol-gel method.

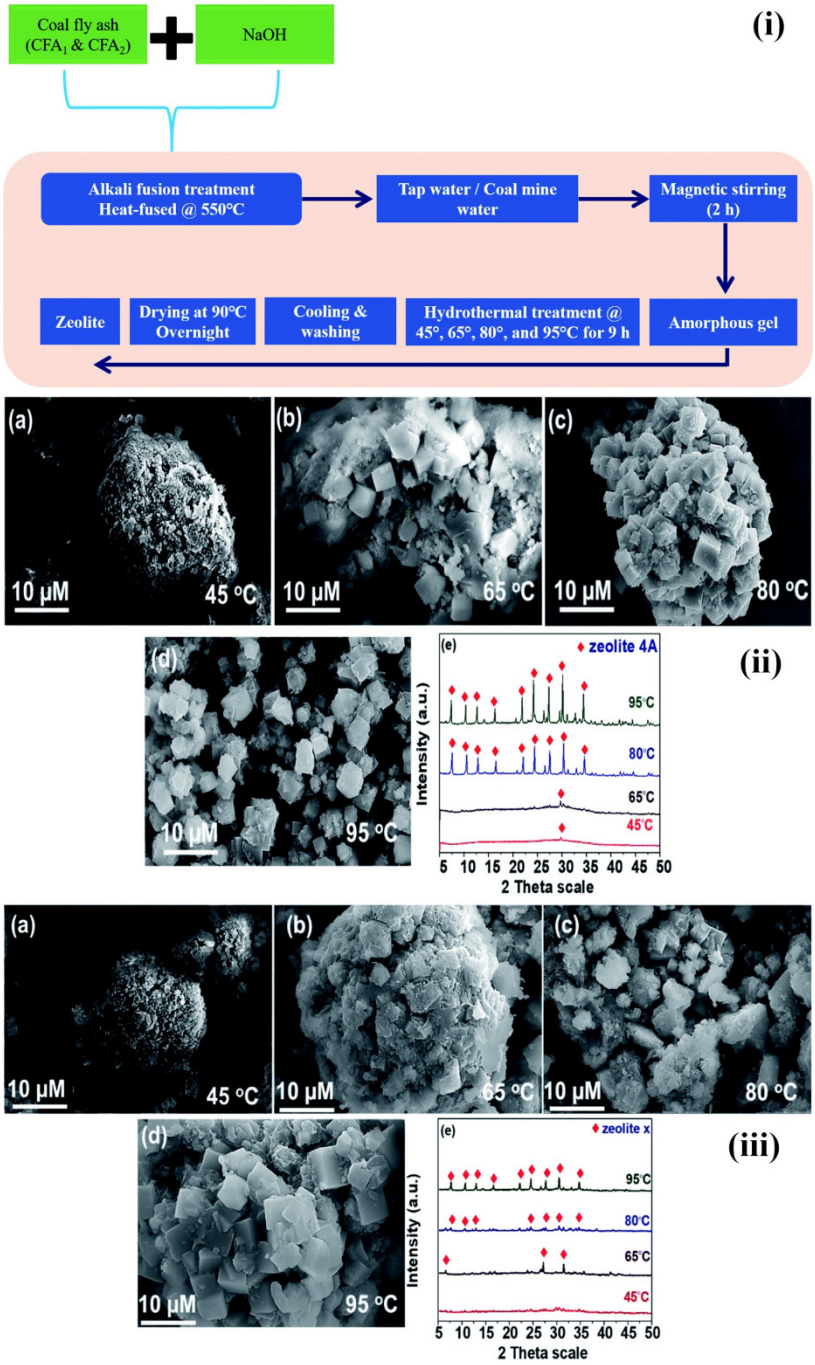

Fig. S3. (i) Alkali fusion method for synthesis of Zeolite X and Zeolite 4A from coal fly ash; (ii) Zeolite-4A (a-d) SEM images,(e) XRD; (iii) Zeolite-X (a-d) SEM images, (e) XRD, Reprinted with the permission from [2].

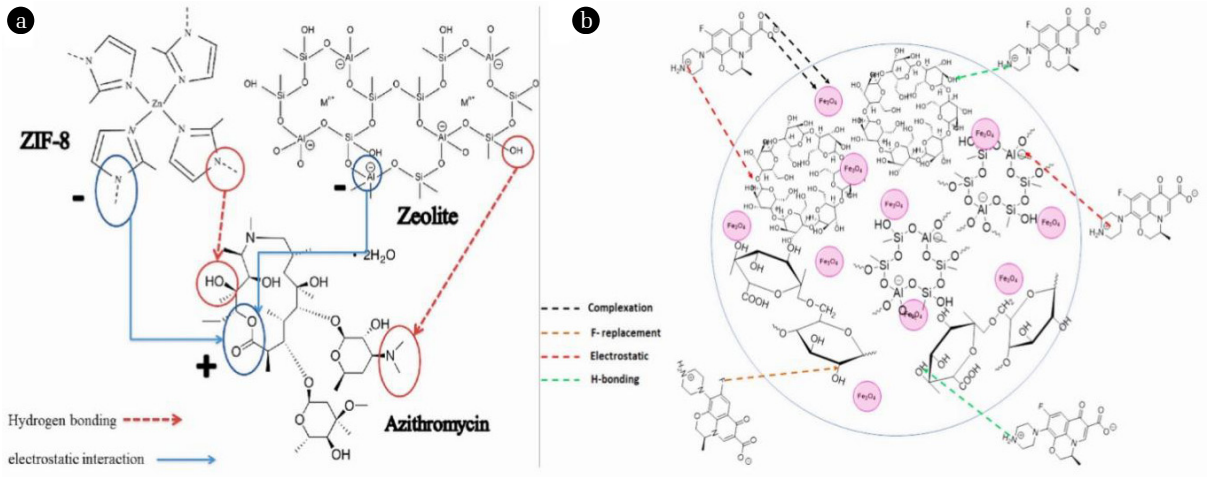

Fig. S4. Mechanism of (a) Azithromycin adsorption on ZIF-8/Zeolite, (b) Levofloxacin adsorption on MZ@β-CD-GA nanocomposite. Reprinted with permission from [3], [4].

References

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