Electronic Supplementary Material (ESI) for Dalton Transactions.

Supplementary Information

Crystallization of zeolite Beta in the presence of an anionic surfactant AESA

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Figures

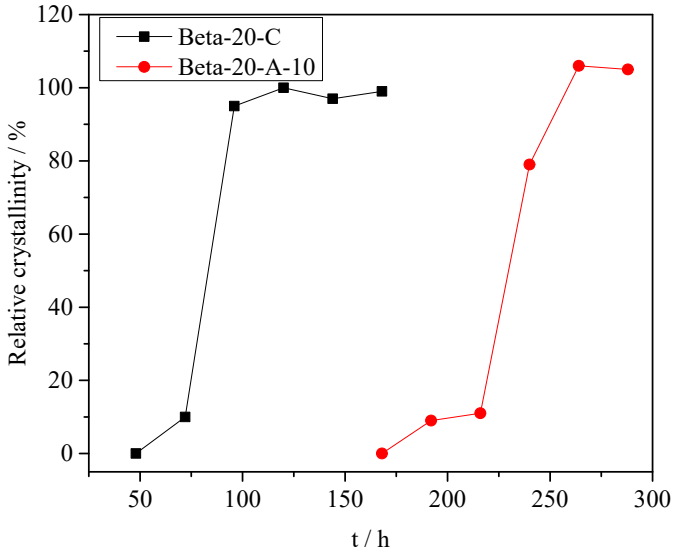

Figure S1 Crystallization Kinetic Curves of Beta-20-C and Beta-20-A-10

Figure S1 shows the crystallization kinetic curve of zeolite Beta synthesized with the addition of AESA, compared with that synthesized without AESA. Without AESA, the crystallization of zeolite Beta started from 72 hours of hydrothermal treatment. The crystals grew very fast, and the crystallization finished after 96 hours. By contrast, the crystallization of zeolite Beta with AESA needs longer induction period compared

with the conventional synthesis. During the induction period, the peak intensities of XRD patterns slightly increased until 216 hours of hydrothermal treatment. The crystallization was going fast afterwards, and the crystals stop growing after 264 hours of synthesis. It is clear that the addition of AESA changed the crystallization kinetic and increased the induction period.

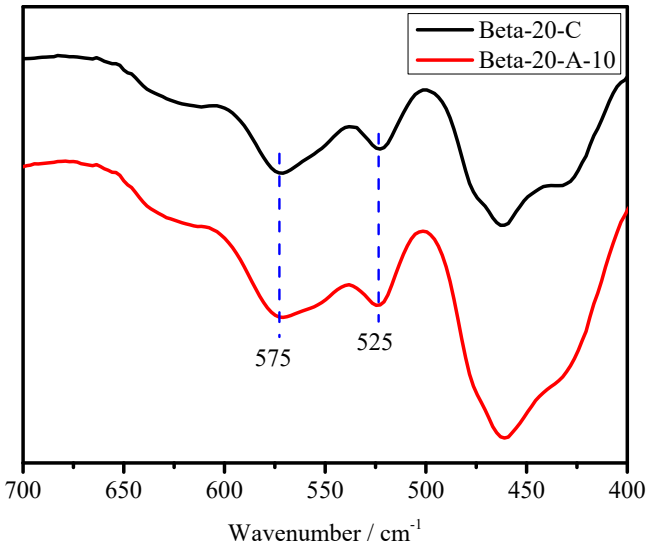

Figure S2 FT-IR spectra of Beta-20-C and Beta-20-A-10

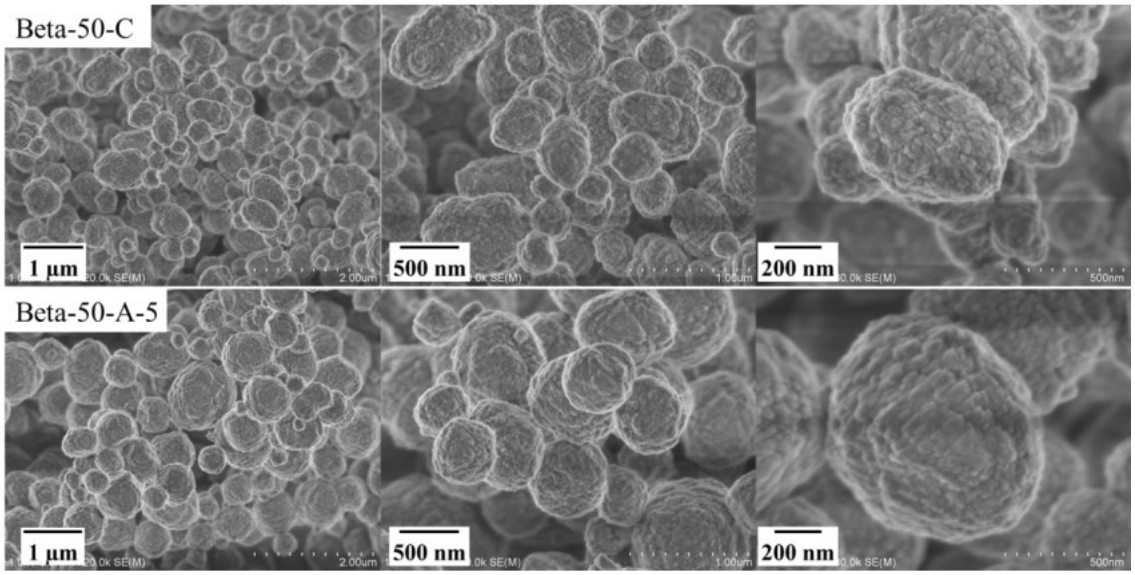

Figure S3 SEM images of Beta-50-C and Beta-50-A-5

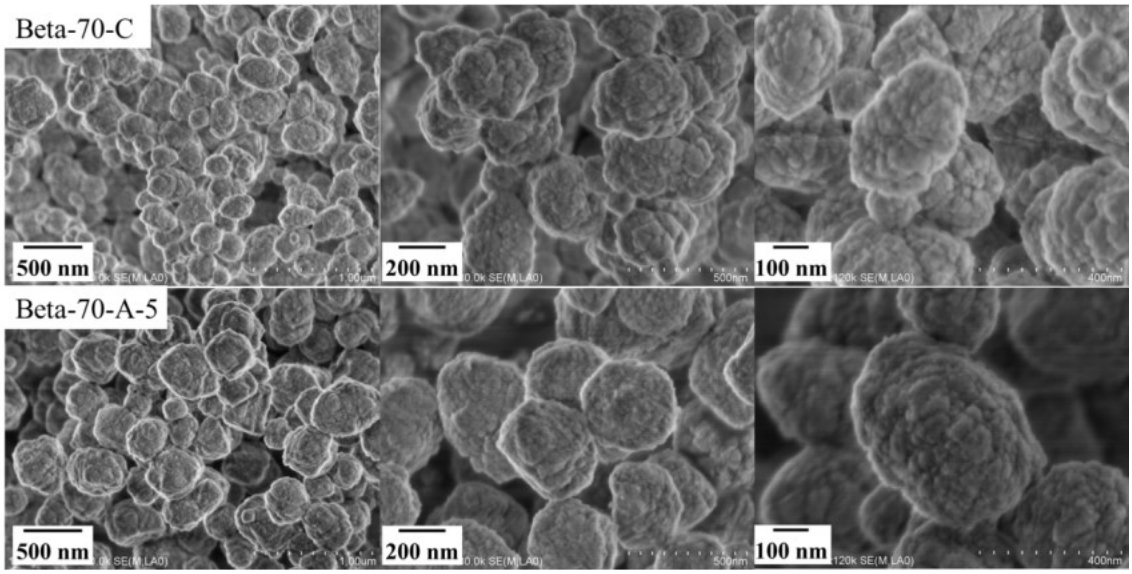

Figure S4 SEM images of Beta-70-C and Beta-70-A-5

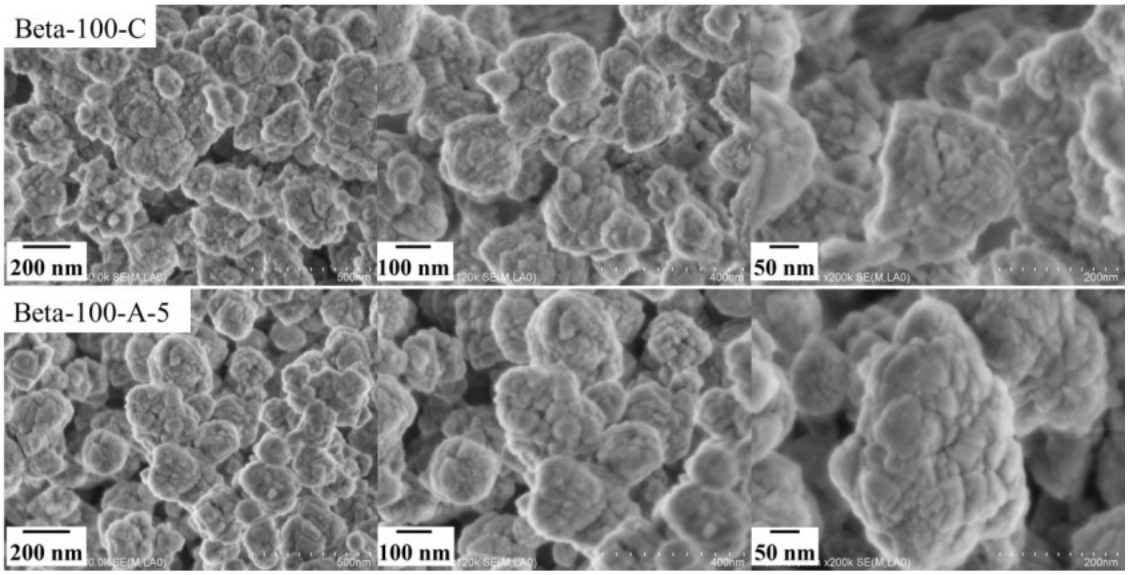

Figure S5 SEM images of Beta-100-C and Beta-100-A-5

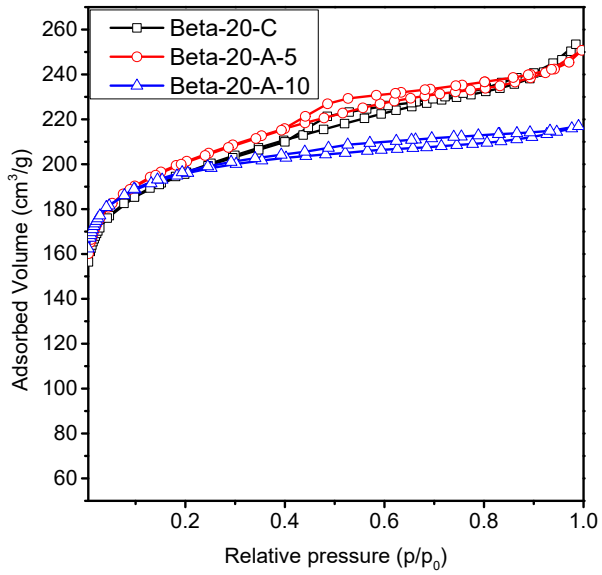

Figure S6 N_2 adsorption-desorption isotherms of Beta-20-C, Beta-20-A-5 and Beta-20-A-10

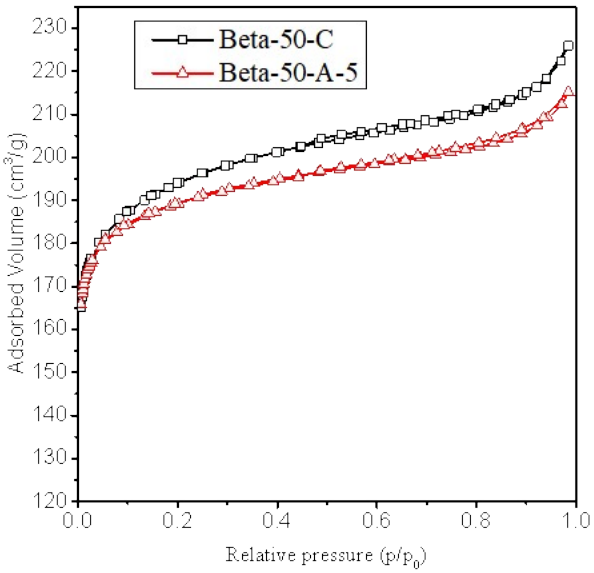

Figure S7 N_2 adsorption-desorption isotherms of Beta-50-C and Beta-50-A-5

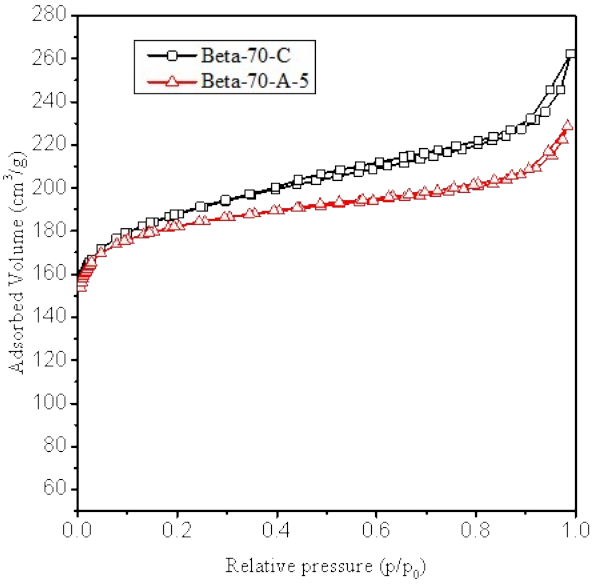

Figure S8 N_2 adsorption-desorption isotherms of Beta-70-C and Beta-70-A-5

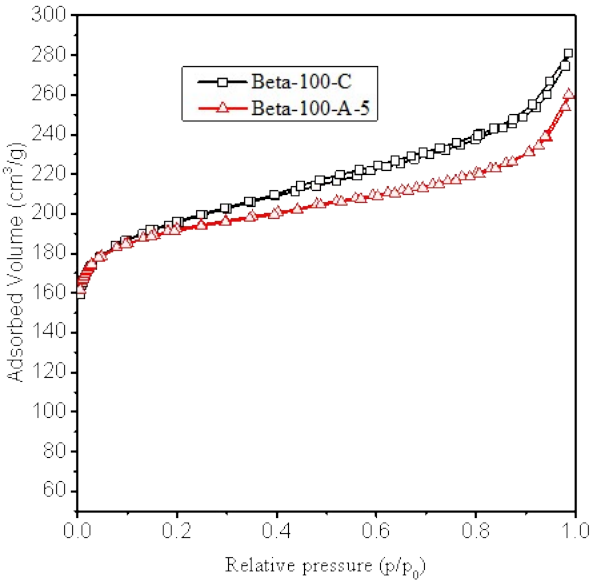

Figure S9 N_2 adsorption-desorption isotherms of Beta-100-C and Beta-100-A-5

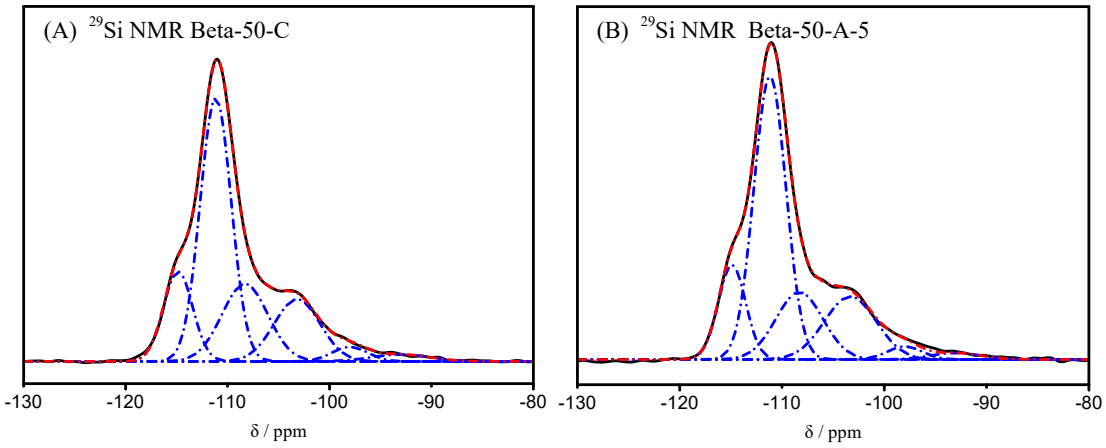

Figure S10 ^{29}Si and ^{27}Al MAS NMR spectra of the Beta-50-C and Beta-50-A-5

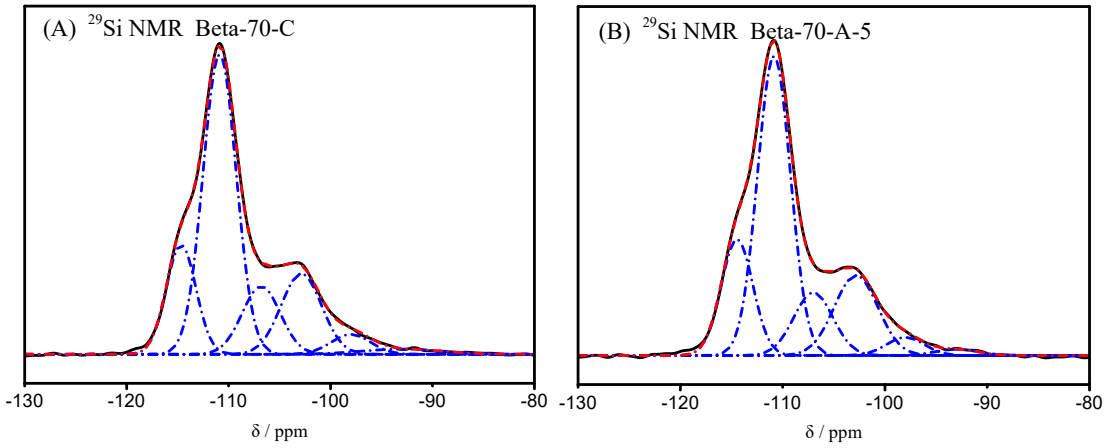

Figure S11 ^{29}Si and ^{27}Al MAS NMR spectra of the Beta-70-C and Beta-70-A-5

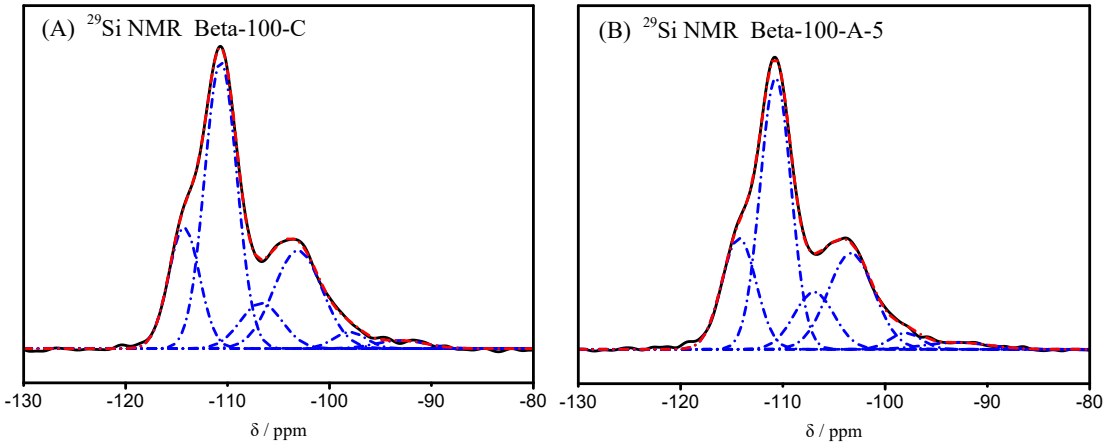

Figure S12 ^{29}Si and ^{27}Al MAS NMR spectra of the Beta-100-C and Beta-100-A-5