I. SUPPLEMENTARY

A. X-ray powder diffraction

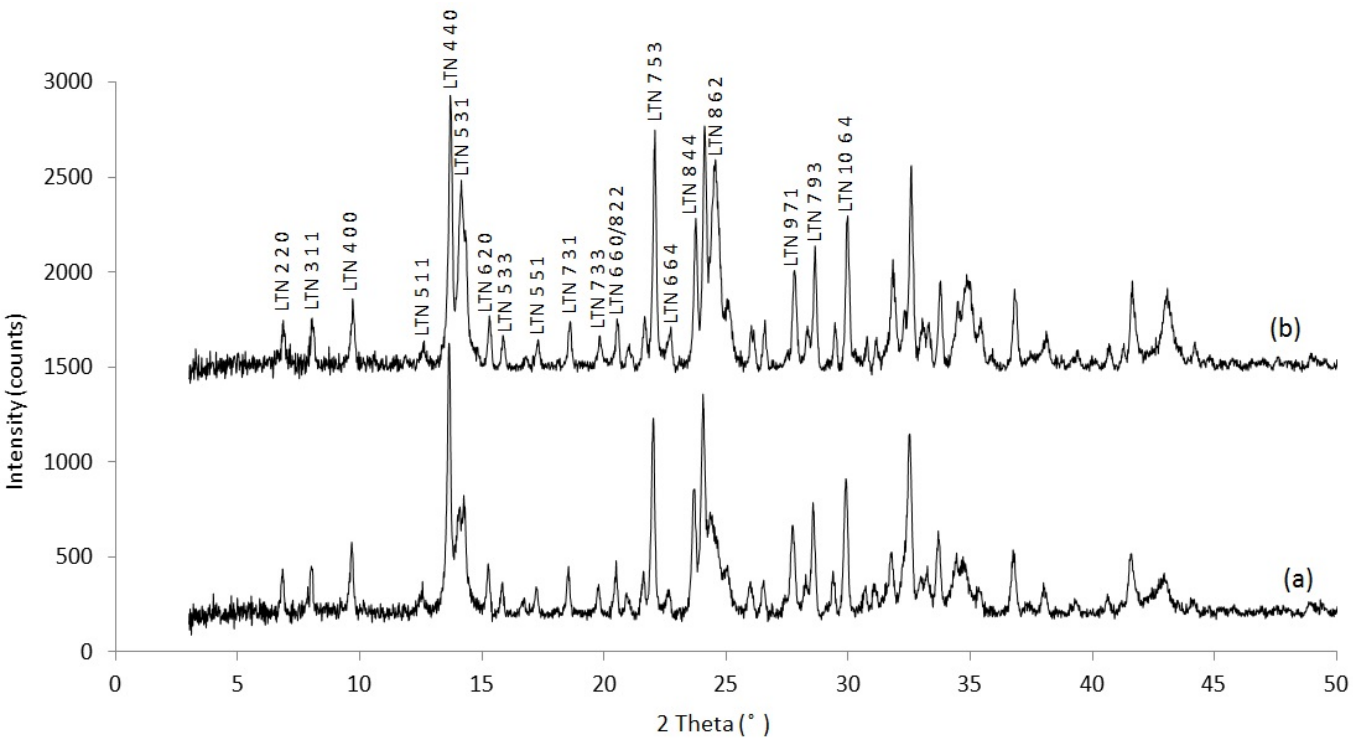
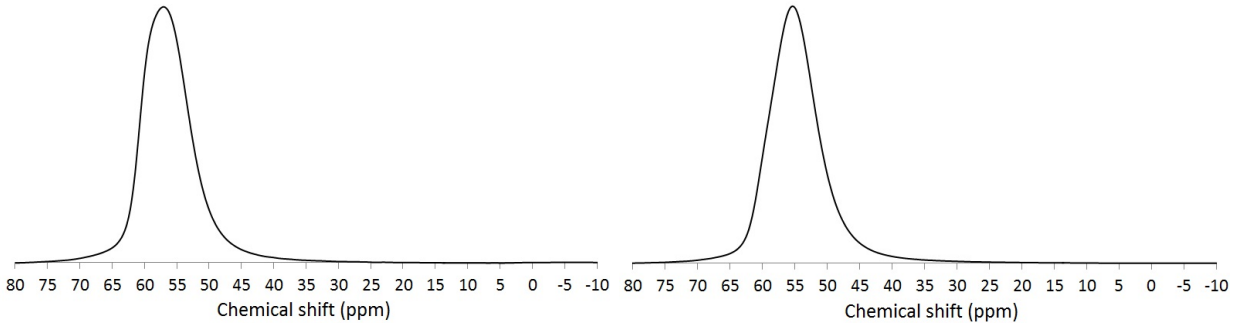


FIG. 1: Powder pattern of as-synthesised Linde Type N zeolite samples using fumed silica. (a) 60 °C (b) 90 °C

B. Hydrothermal synthesis of zeolite A with SDAs

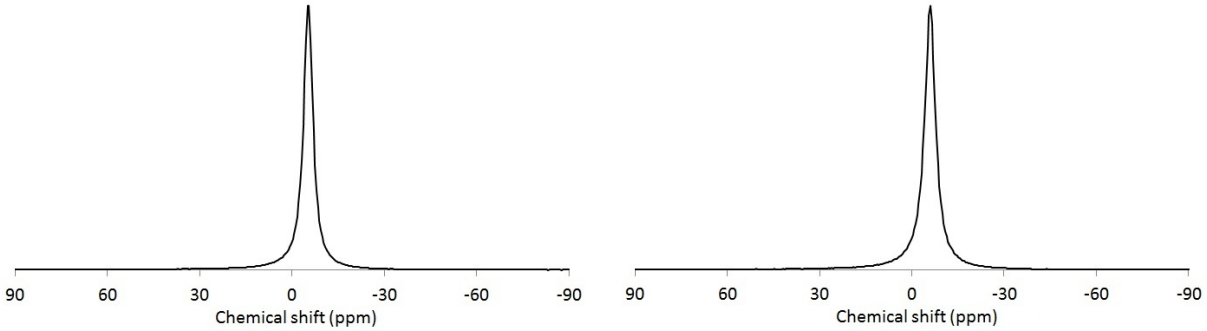
1. ^{27}Al SS MAS NMR



(a) (b)

FIG. 2: As-synthesised zeolite A samples using precipitated silica with (a) 79% silica, and (b) 98% silica

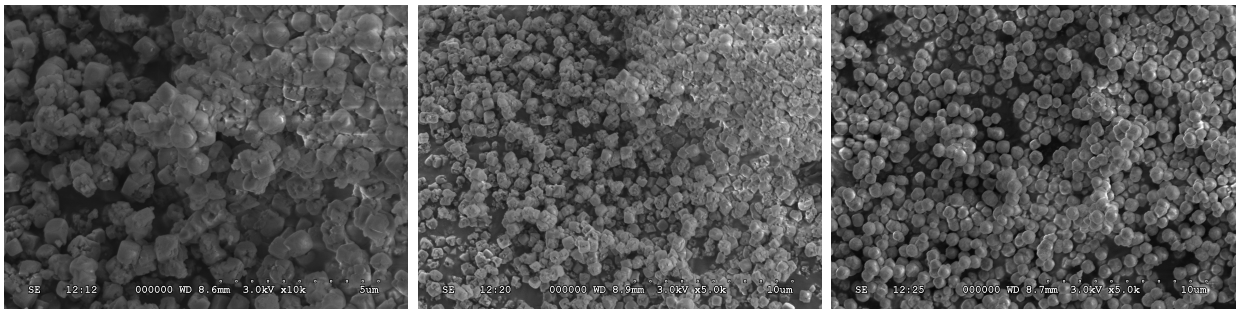
2. ^{23}Na SS MAS NMR



(a) (b)

FIG. 3: As-synthesised zeolite A samples using precipitated silica with (a) 79% silica, and (b) 98% silica

3. SEM



(a) (b) (c)

FIG. 4: Micrographs of as-synthesised zeolite A samples using precipitated silica with (a),(b) 79% silica, and (c) 98% silica

C. Hydrothermal synthesis of zeolite A with no SDAs

1. ^{29}Si SS MAS NMR

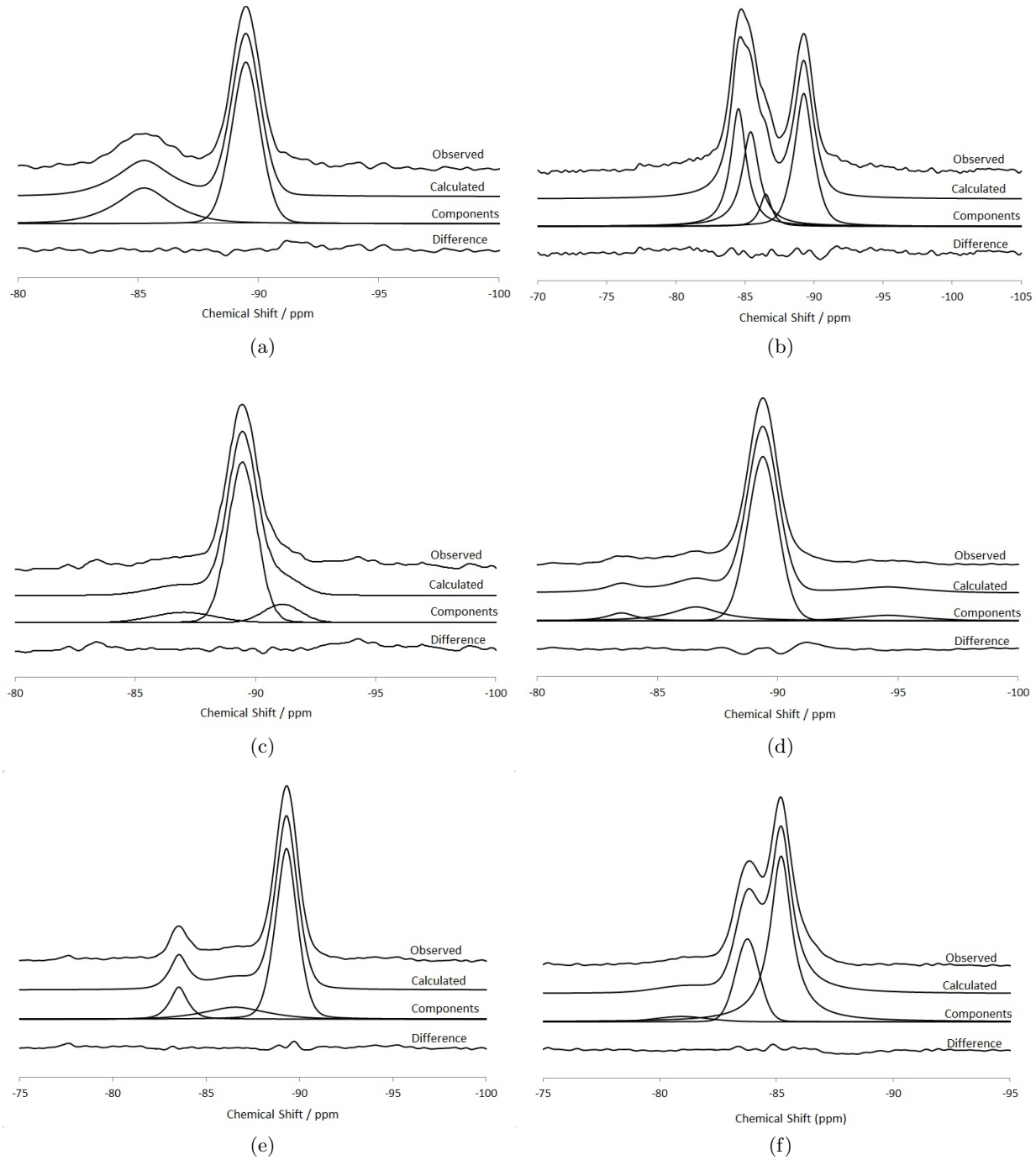


FIG. 5: As-synthesised zeolite samples with no SDAs at (a) 40 °C (b) 50 °C (c) 60 °C (d) 70 °C (e) 80 °C for 1 hour, (f) 95 °C for 2 hours

2. ^{29}Si CP MAS NMR

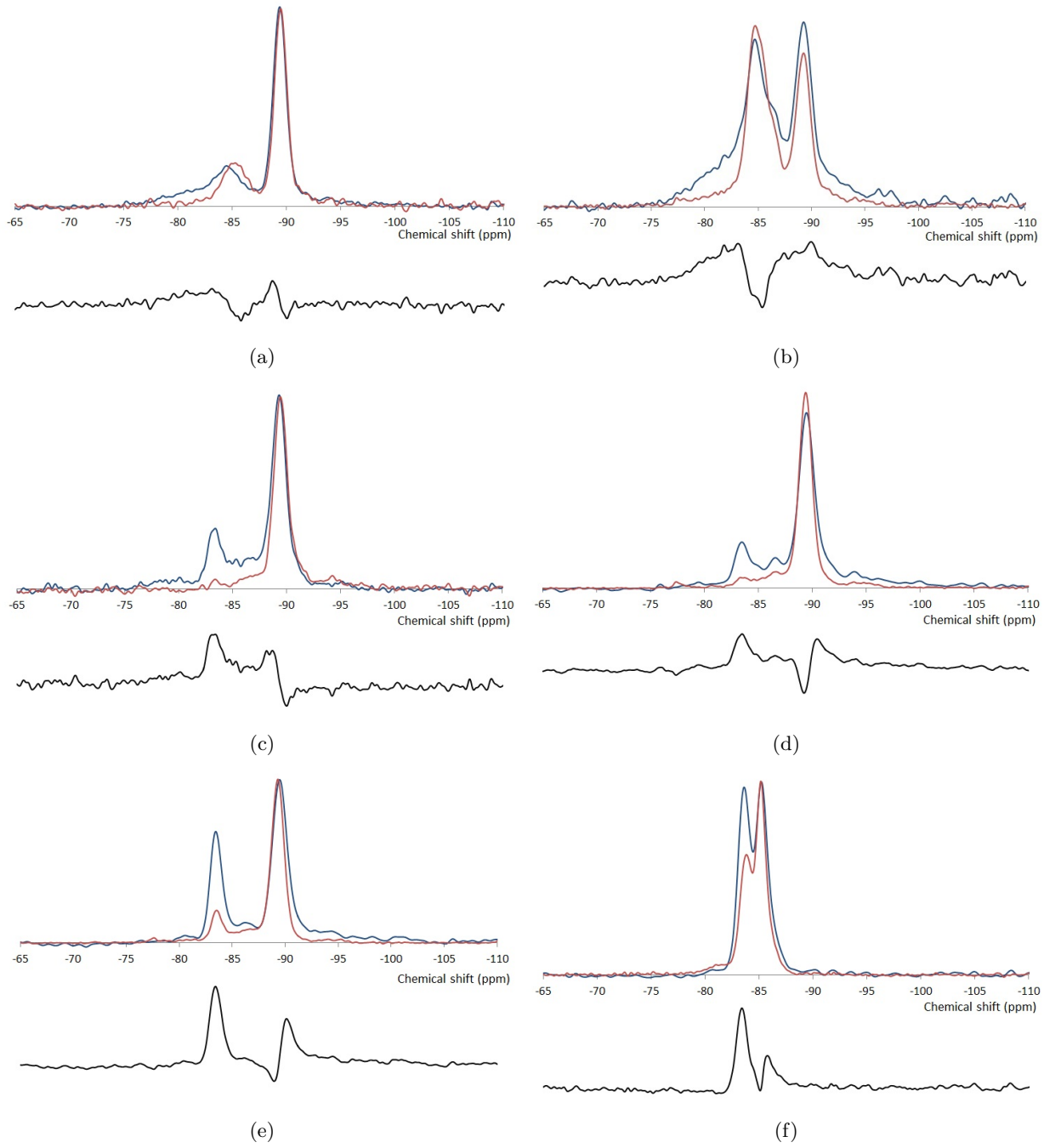


FIG. 6: As-synthesised zeolite samples with no SDAs at (a) 40 °C (b) 50 °C (c) 60 °C (d) 70 °C (e) 80 °C for 1 hour, (f) 95 °C for 2 hours, red - signal of ^{29}Si MAS NMR, blue - signal of ^{29}Si CP MAS NMR, black - difference between two signals

3. ^{27}Al SS MAS NMR

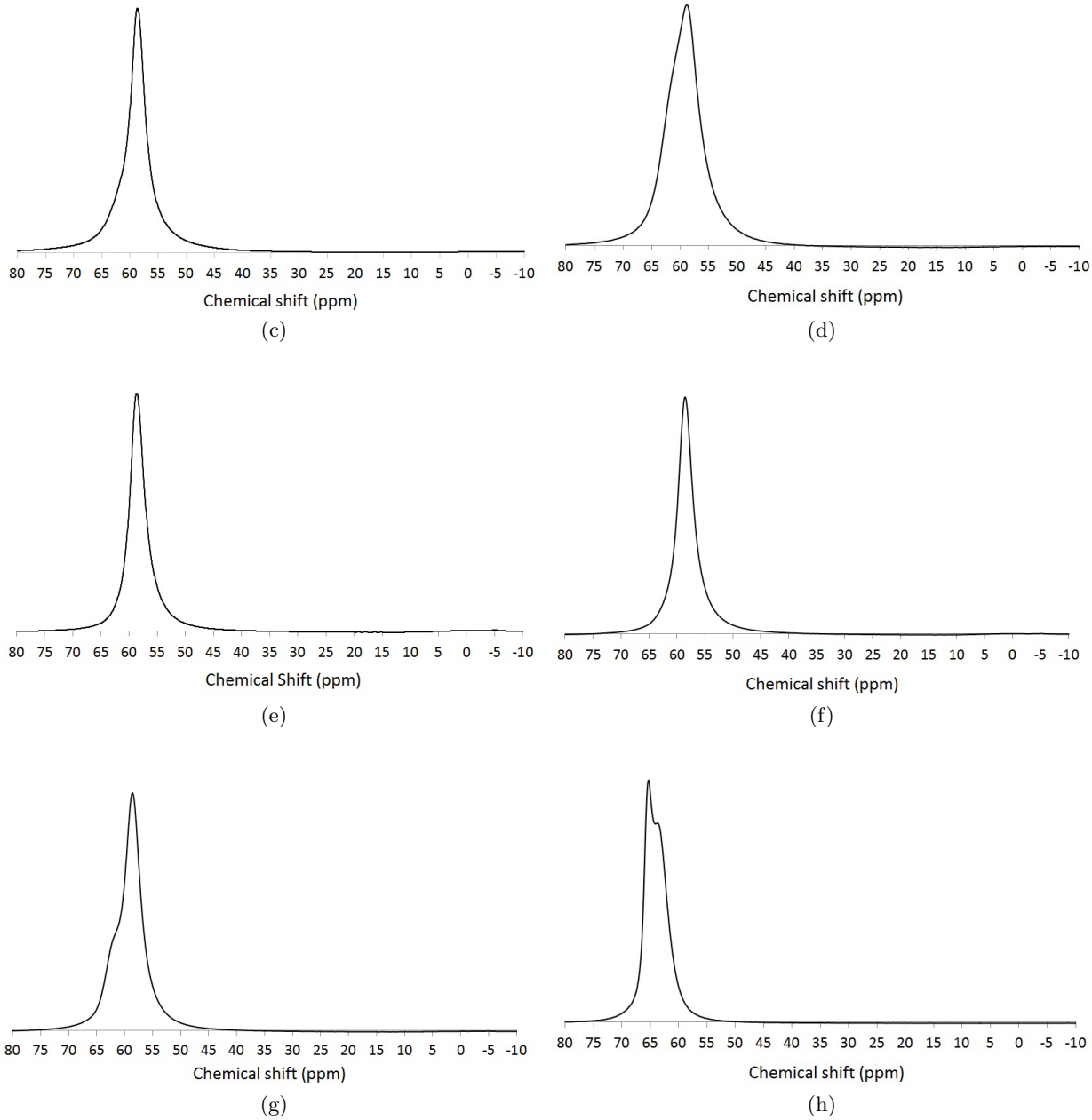


FIG. 7: As-synthesised zeolite samples with no SDAs at (a) 40 °C (b) 50 °C (c) 60 °C (d) 70 °C (e) 80 °C for 1 hour, (f) 95 °C for 2 hours

4. ^{23}Na SS MAS NMR

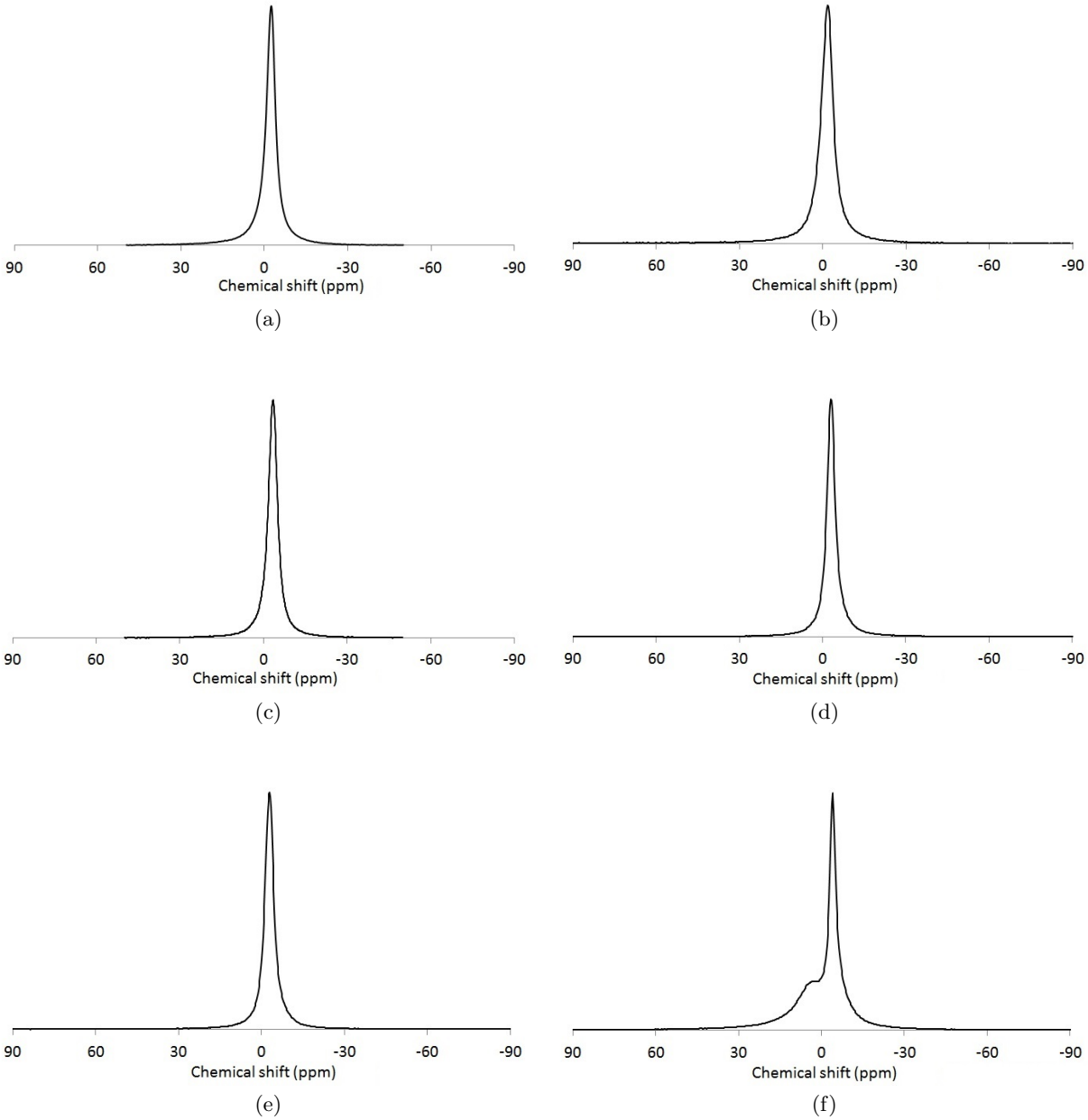


FIG. 8: As-synthesised zeolite samples with no SDAs at (a) 40 °C (b) 50 °C (c) 60 °C (d) 70 °C (e) 80 °C for 1 hour, (f) 95 °C for 2 hours

5. SEM

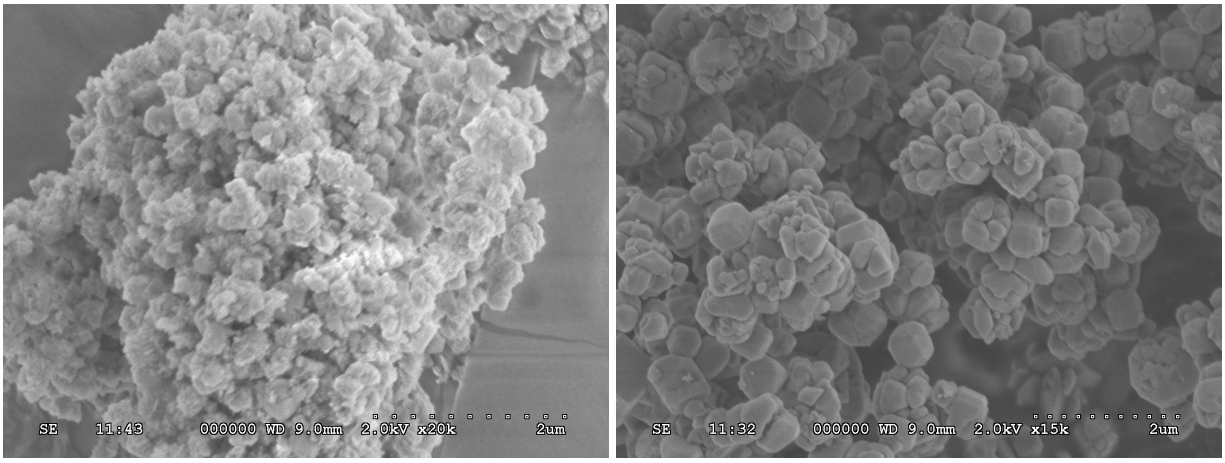


FIG. 9: Micrographs of as-synthesised zeolite sampes with no SDAs at (a) 50 °C (b) 80 °C for 1 hour

D. Microwave synthesis of Linde Type N zeolite with no SDAs

1. SS MAS NMR

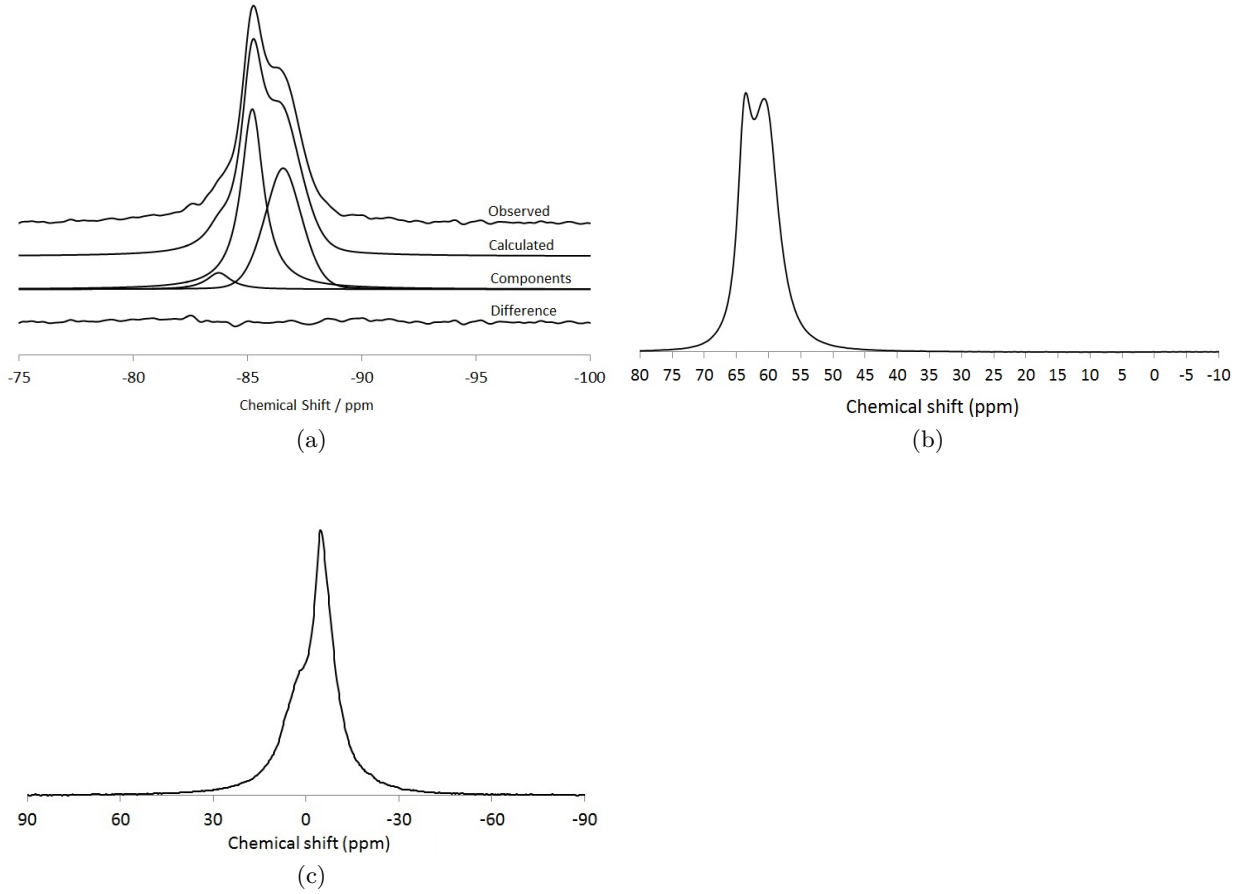


FIG. 10: SS MAS NMR spectra of as-synthesised zeolite sample without SDAs, (a) ^{29}Si (b) ^{27}Al (c) ^{23}Na

2. SEM

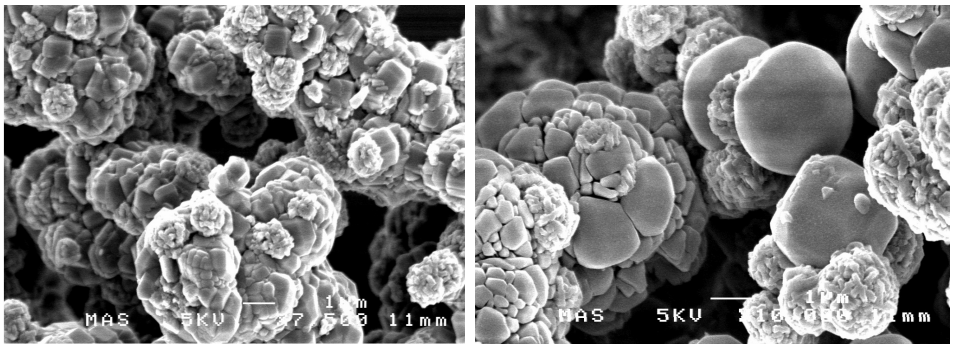


FIG. 11: Micrographs of as-synthesised zeolite samples at 90 °C