Supplementary Information
for
Si-based nanocomposites derived from layered $CaSi_2$: Influence of synthesis conditions on composition and anode performance in Li ion batteries.

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Sample preparation:

Mixture of $CaSi_2$ + α $NiCl_2$ (α: molar ratio) → heated at 600 degree C → Washed with anhydrous dimethylformamide.

The nitrogen adsorption isotherms:

The isotherms were measured at 77 K for the prepared powders containing Ca_xSi_2 particles (Nova 3000e instrument, Quantachrome Instruments). The specific surface area was calculated by the BET method using adsorption data ranging from P/P_0 = 0.10 to 0.30 where P and P_0 represents the pressure obtaining adsorption data and saturated vapour pressure of N_2, respectively.

Table S1. Specific surface area for samples containing Ca_xSi_2 particles.

sample	Temp./°C	α	surface area (m^2/g)
A6	600	0.7	8.36
A5		1.0	22.1
A4		1.1	29.8

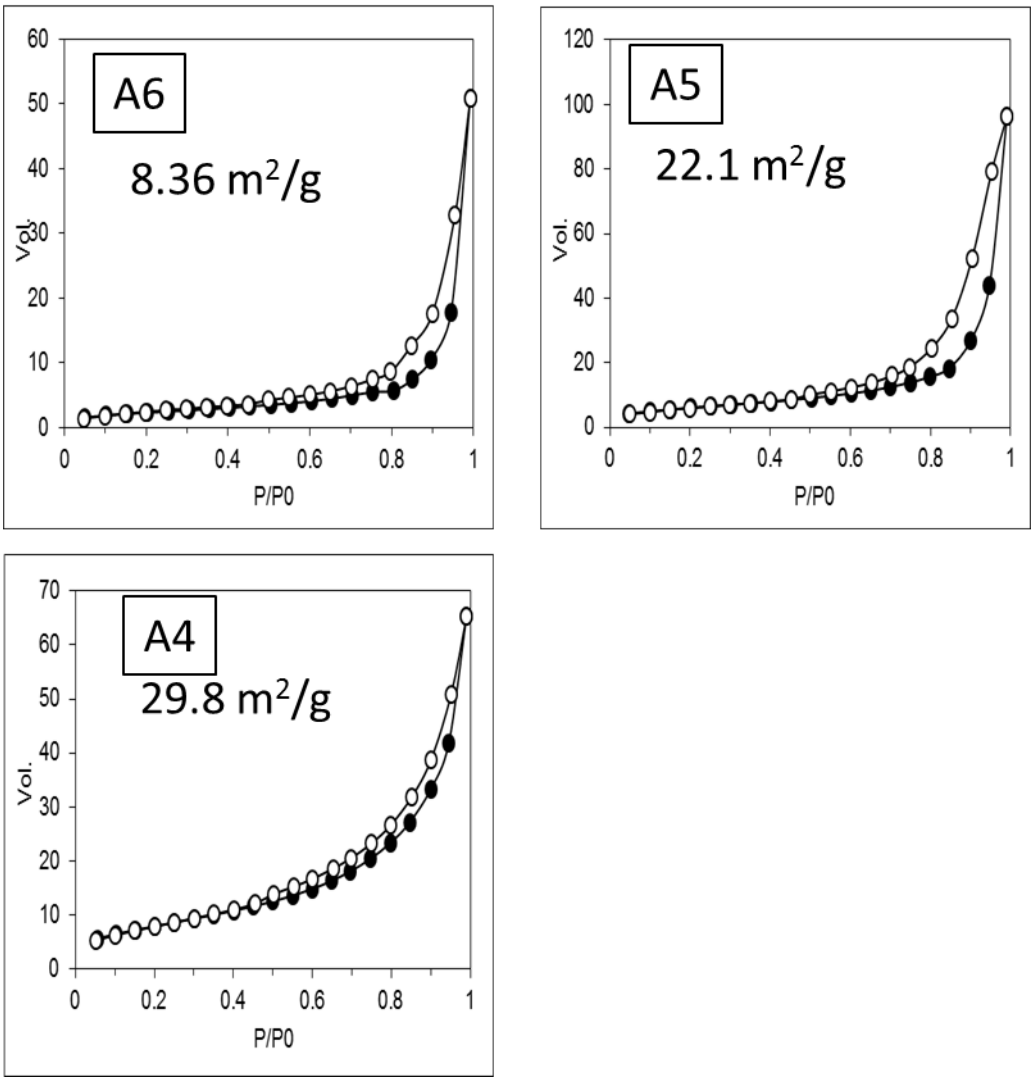

Figure S1. Nitrogen adsorption isotherms