Supplementary data for

An XPS/AES comparative study of the surface behaviour of nano-silicon anodes for Li-ion batteries

Figure S1. Beginning of the galvanostatic curve corresponding to the first lithiation of Si electrodes

Figure S2. Surface analyses of electrode B after a lithiation of 360 mAh.g⁻¹ a) XPS spectra (F 1s and P 2p core peaks) and b) P LVV and F KLL Auger transition.
**Figure S3.** SEM images of the investigated particle before and after sputtering.

![SEM images before and after sputtering](image)

20 min of sputtering

**Figure S4.** SEM image and Li Auger spectrum obtained at the surface of electrode C, after a full lithiation a) for a silicon particle and b) for a carbon fiber. The analyzed area is represented by a blue square on the SEM image.

![SEM images and Auger spectra](image)
Figure S5. F 1s spectra obtained for electrodes B, C, and D.