**Supporting information for:**

MuSR revealing sodium ion mobility in hard carbon anodes before and after sodiation

Anders C. S. Jensena,b, Kirstin I. E. Olssonb,c, Heather Aub, Maria-Magdalena Titiricib and Alan J. Drew\*a

aSchool of Physics and Astronomy, Queen Mary University of London, SW7 2AZ London, United Kingdom, bDepartment of Chemical Engineering, Imperial College London, Mile End Road, E1 4NS London, United Kingdom

\*corresponding author: Email: a.j.drew@qmul.ac.uk



Figure S1: A) SAXS region fitted using a pored equation as described by Stevens and Dahn 20001 fitting the surface scattering (pink) and the scattering from the nano pores(green).



Figure S2: Arrhenius plot of the jump frequency and temperature for the sodiated(A) and desodiated samples(B).

1. Stevens, D. A.; Dahn, J. R., An In Situ Small‐Angle X‐Ray Scattering Study of Sodium Insertion into a Nanoporous Carbon Anode Material within an Operating Electrochemical Cell. *Journal of The Electrochemical Society* **2000,** *147* (12), 4428-4431.