Electronic Supplementary Material (ESI) for RSC Advances.

Supporting Information:

Carbon Aerogels with Improved Flexibility by Sphere Templating

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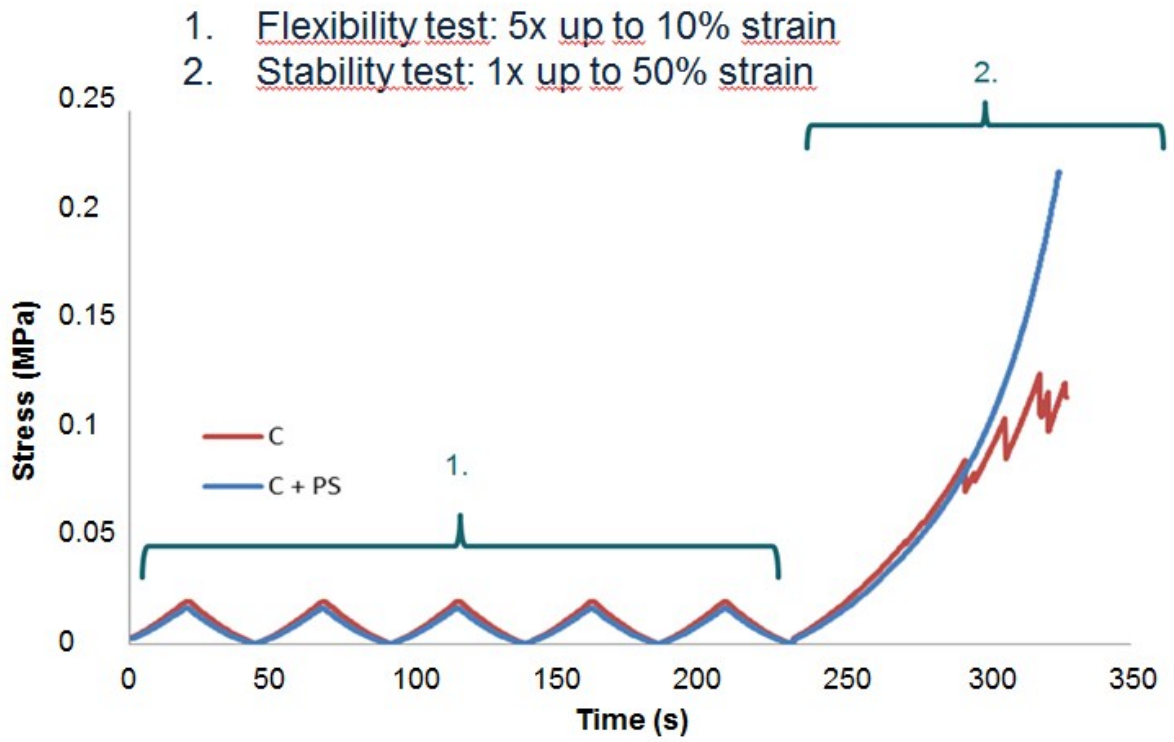

Figure S1. Chronological succession of the flexibility and stability tests during the mechanical testing experiments.

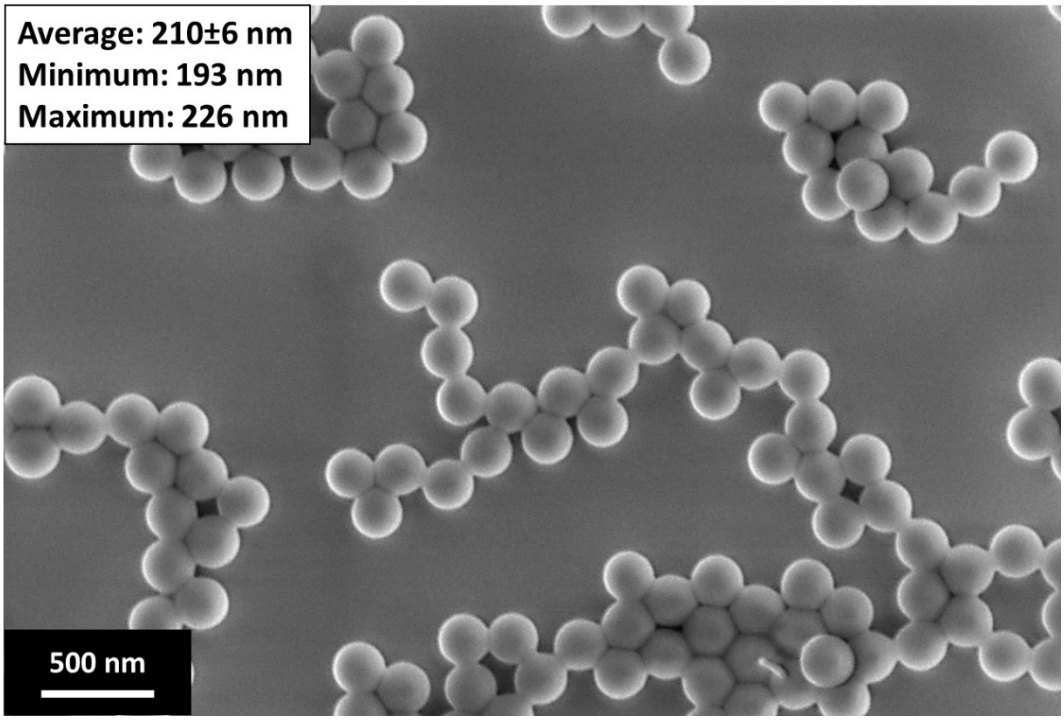

Figure S2. Scanning electron micrograph of the polystyrene nanospheres. The size data relate to measurements of 100 individual nanospheres.

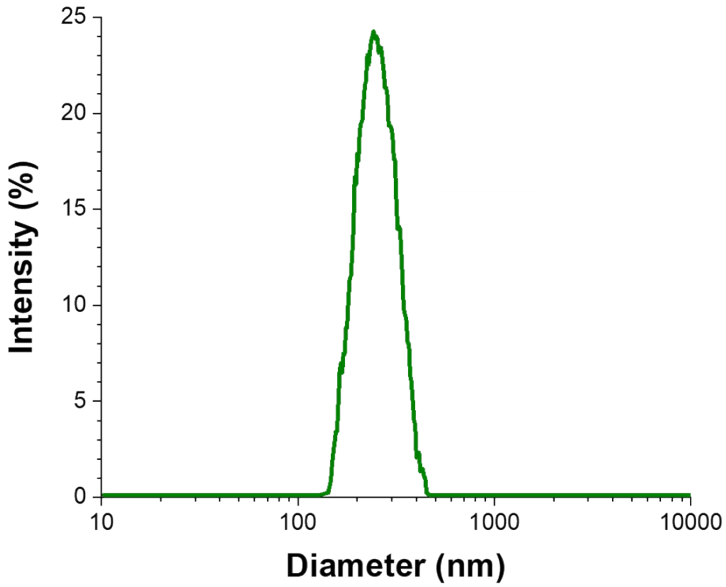

Figure S3. Size distribution of PS nanospheres obtained from dynamic light scattering.
Z-average = 244 nm, PdI = 0.020.

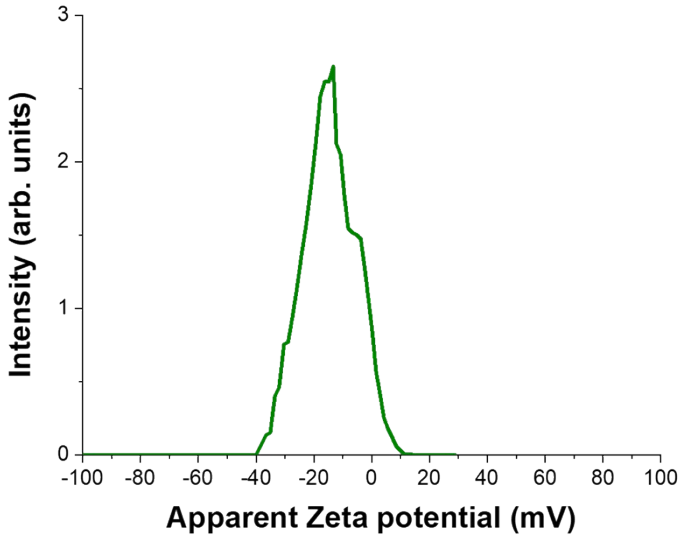

Figure S4. Zeta potential of PS nanosphere solution yielding an average value of -15.7 mV from 12 runs.

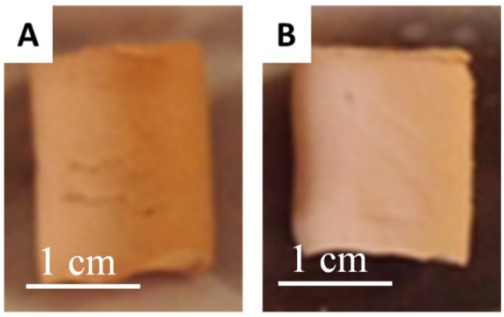

Figure S5. Photographs of (A) pristine RF aerogel, (B) RF + 0.1 g PS.

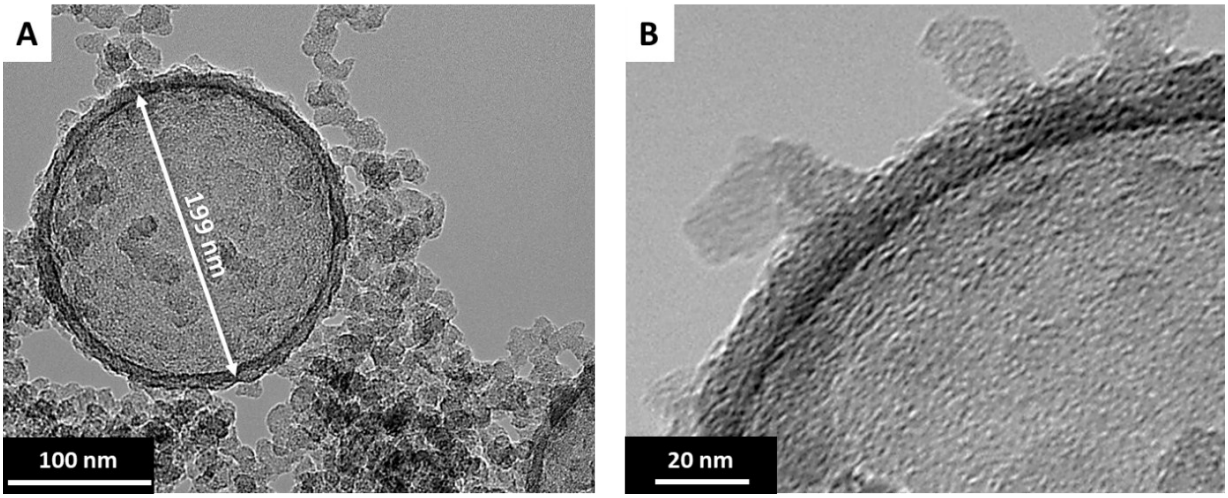

Figure S6. Transmission electron micrographs of a hollow sphere found in C+PS.

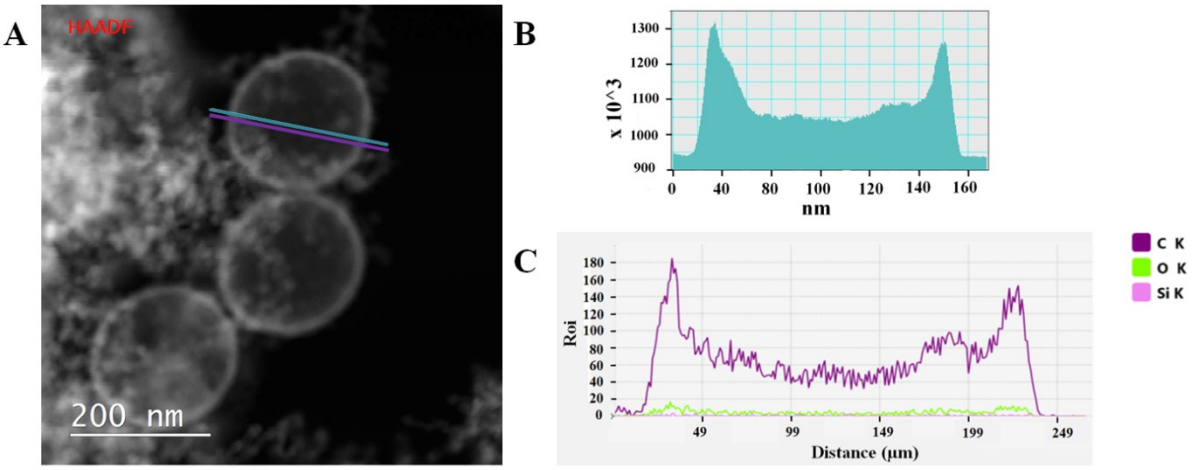

Figure S7. (A) High angle annular dark field (HAADF) scanning transmission electron microscopy image (STEM), (B) intensity scan according to the turquoise line in (A), energy dispersive X-ray spectra (EDX) for C, O and Si according to the violet line in (A).

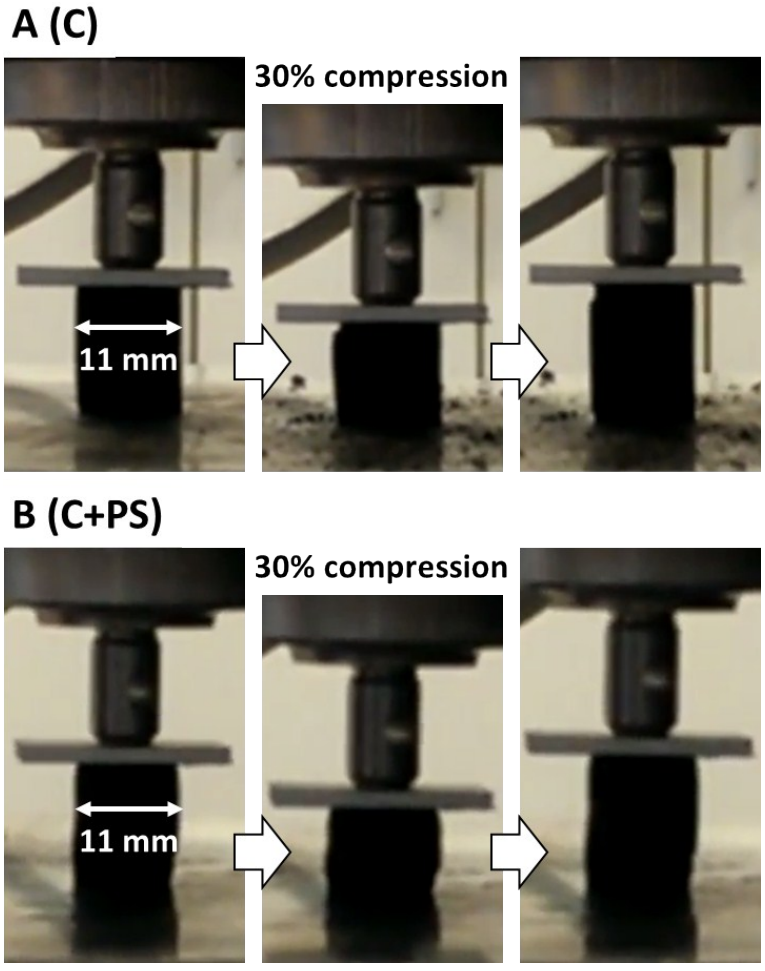

Figure S8. Photographs during mechanical testing. (A) Pristine flexible C aerogel monolith and (B) C+PS aerogel.

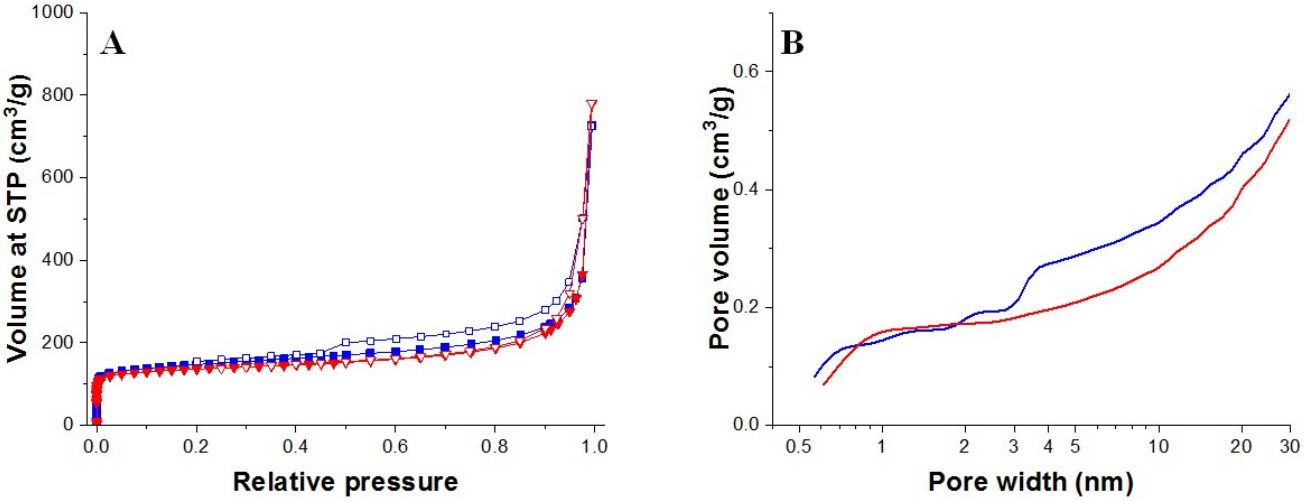

Figure S9. Typical nitrogen adsorption/desorption isotherms (A) and pore size distributions (QSDFT) (B) for a pristine flexible CA (red) and a PS modified CA (blue).