Electronic Supplementary Material (ESI) for Nanoscale. This journal is © The Royal Society of Chemistry 2018

SI

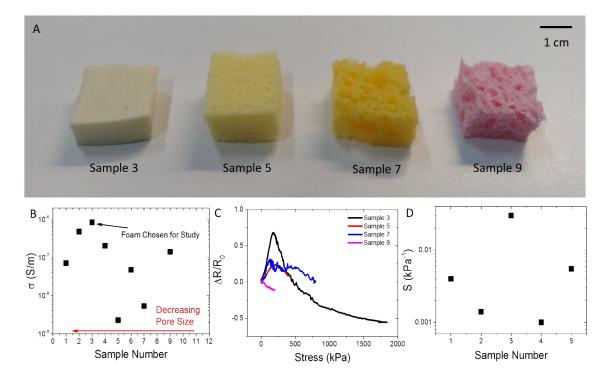
## Graphene-coated polymer foams as tuneable impact sensors

Conor S Boland,<sup>1\*</sup> Umar Khan,<sup>2</sup> Mathew Binions,<sup>1</sup> Sebastian Barwich,<sup>1</sup> John B Boland,<sup>1</sup> Denis Weaire<sup>1</sup> and Jonathan N Coleman<sup>1\*</sup>

<sup>1</sup>School of Physics, CRANN and AMBER Research Centres, Trinity College Dublin, Dublin 2, Ireland

<sup>2</sup>Institute of Technology Sligo, Ash Lane, Sligo, F91 YW50, Ireland

\*bolandc1@tcd.ie, \*colemaj@tcd.ie



FigureS1: Preliminary characterisation of foams. A) Photograph of select foams used during initial testing. Going from left to right visual pore size and surface roughness is seen to increase. B) Conductivity as a function of testing sample. Values for conductivity tend to increase with decreasing pore size, peaking at Sample 3. C) Log-log plot of fractional resistance change as a function of stress for select foams. D) Compressive pressure gauge factor as a function of Sample Number. Sample three again yields the highest metric value.

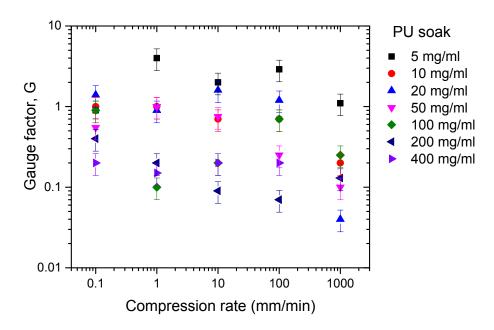


Figure S2: Rate dependence of gauge factor of PU-infused graphene foam for a range of different PU infusion concentartions.