Supplementary Material (ESI) for Journal of Materials Chemistry

High Concentration Few-layer Graphene Sheets Obtained by Liquid Phase Exfoliation of Graphite in Ionic Liquid

Daniele Nuvoli, Luca Valentini, Valeria Alzari, Sergio Scognamillo, Silvia Bittolo Bon, Massimo Piccinini, Javier Illescas and Alberto Mariani*

Tyndall effect

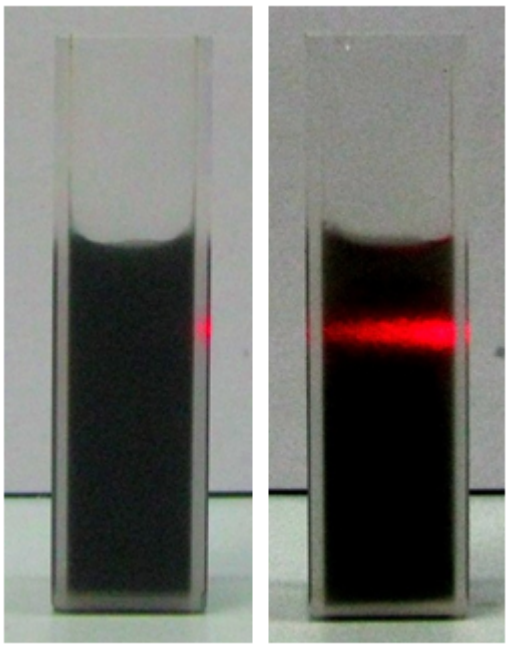

Figure S1. Tyndall effect exhibited by a graphene dispersion in HMIH (right picture): when the red laser light passes through the dispersion, it is scattered and becomes visible. For comparison, an analogous experiment on a graphite dispersion is also shown (left picture).

FE-SEM images

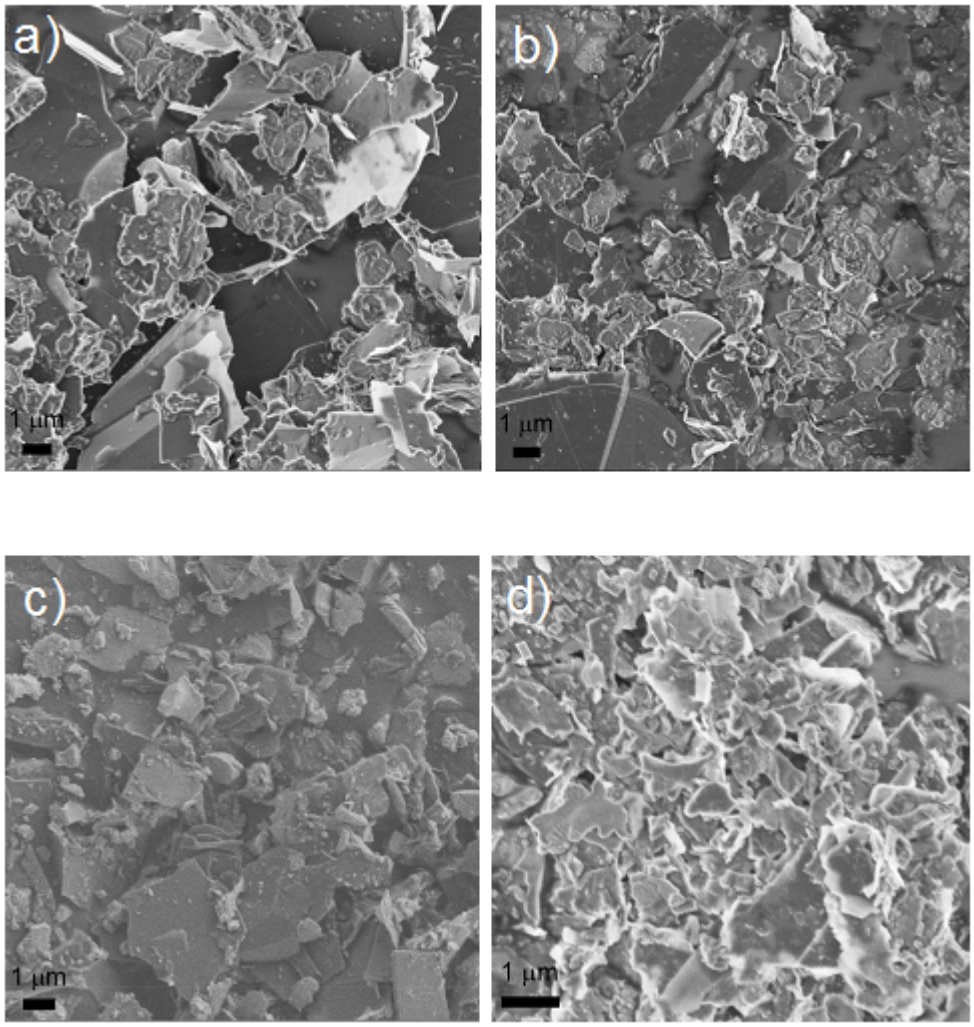

Figure S2. FE-SEM images of the graphene flakes obtained from (a) 0.1 wt.%, (b) 0.5 wt.%, (c) 1 wt.% and (d) 2 wt.% dispersion of graphite in ionic liquid.

UV analysis

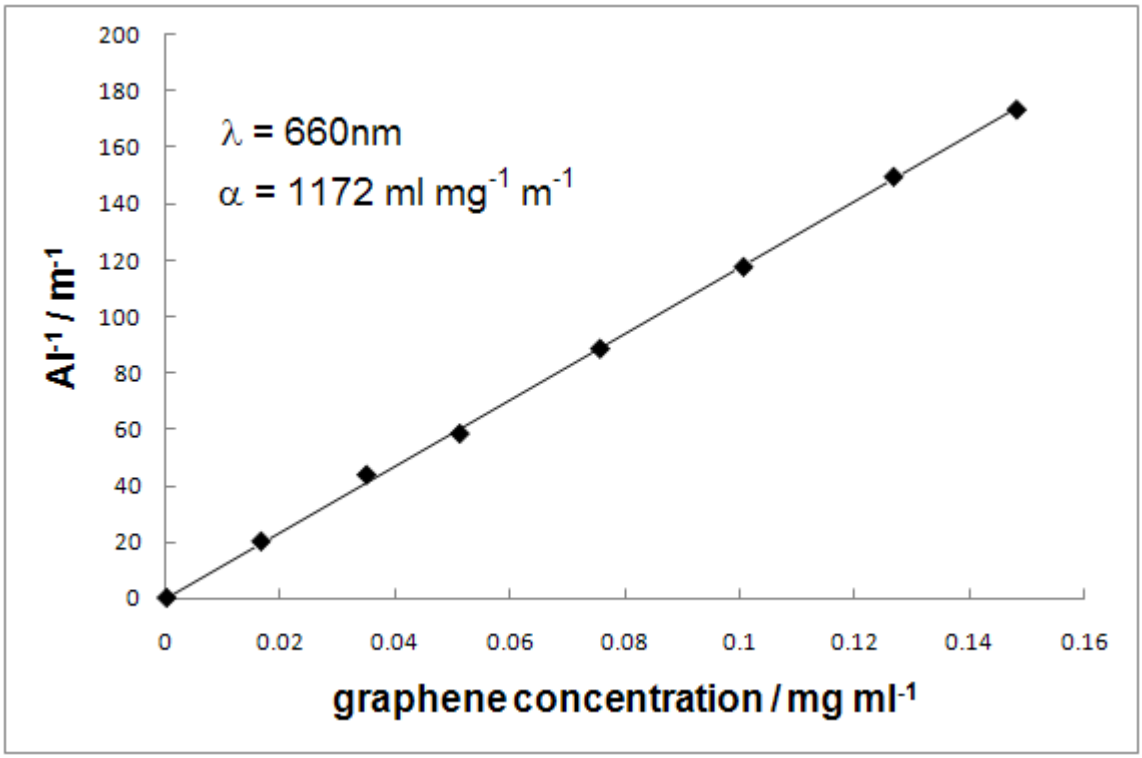

Figure S3. Optical absorbance (660 nm) divided by cell length as a function of concentration for graphene in HMIH. A Lambert-Beer behaviour is shown, with an absorption coefficient α = 1172 ml mg^{-1} m^{-1}.

For each dispersion, ten measurements were carried out. In the above plot, the average value is displayed (reproducibility was always within 5%).