

# Supporting Information

## Functionalization of graphene oxide by tetrazine derivatives: a versatile approach toward covalent bridges between graphene sheets

*Yuan Li,<sup>†</sup> Valérie Alain-Rizzo,<sup>†</sup> Laurent Galmiche,<sup>†</sup> Pierre Audebert,<sup>†</sup> Fabien Miomandre,<sup>†,\*</sup>  
Guy Louarn,<sup>‡</sup> Michael Bozlar,<sup>§</sup> Michael A. Pope,<sup>§,1</sup> Daniel M. Dabbs,<sup>§</sup> Ilhan A. Aksay<sup>§,\*</sup>*

<sup>†</sup>PPSM – CNRS UMR8531 – Ecole Normale Supérieure de Cachan, 61 Avenue Président  
Wilson, 94235 Cachan, France; <sup>‡</sup>Institut des Matériaux Jean Rouxel – Université de Nantes,  
CNRS –

2 rue de la Houssinière, 44322 Nantes, France; <sup>§</sup>Department of Chemical and Biological  
Engineering, Princeton University, Princeton, New Jersey 08544, USA

<sup>1</sup>Present address: University of Waterloo, Waterloo, ON N2L 3G1, Canada

\*Address correspondence to: [mioman@ens-cachan.fr](mailto:mioman@ens-cachan.fr) and [iaksay@princeton.edu](mailto:iaksay@princeton.edu)

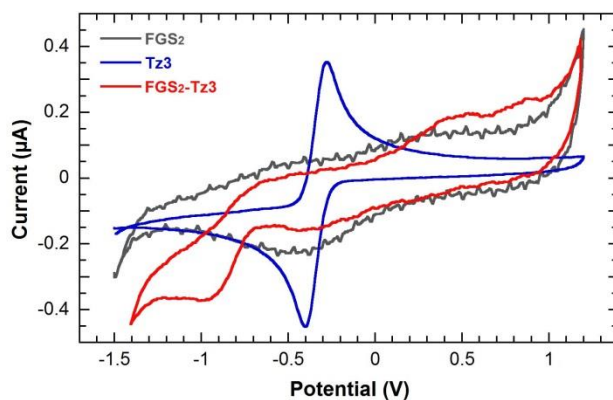


Figure SI-1: CVs for unmodified **FGS<sub>2</sub>** (gray line), **Tz3** (3-chloro-6-(methoxyadamantane-1-yl)-*s*-tetrazine”, blue line) and the **FGS-Tz3** compound (red line). Each CV was made using suspensions or solutions in propylene carbonate (with 0.1M TBAPF<sub>6</sub> as the electrolyte) against a platinum electrode.

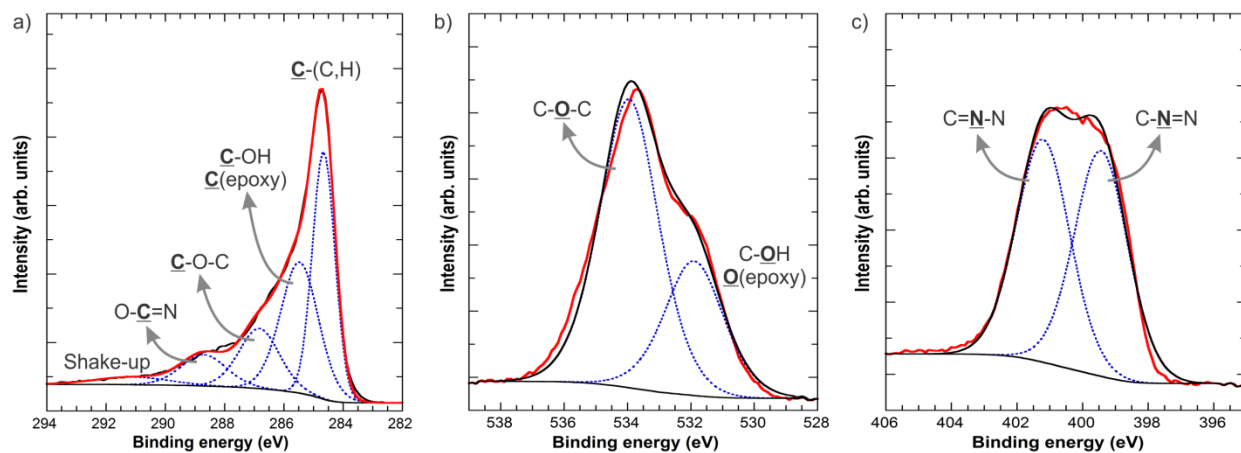


Figure SI-2: XPS for **FGS-Tz2**: (a) C(1s), (b) O(1s), and (c) N(1s) core level spectra (red lines) with the results of curve fitting (blue and black lines).

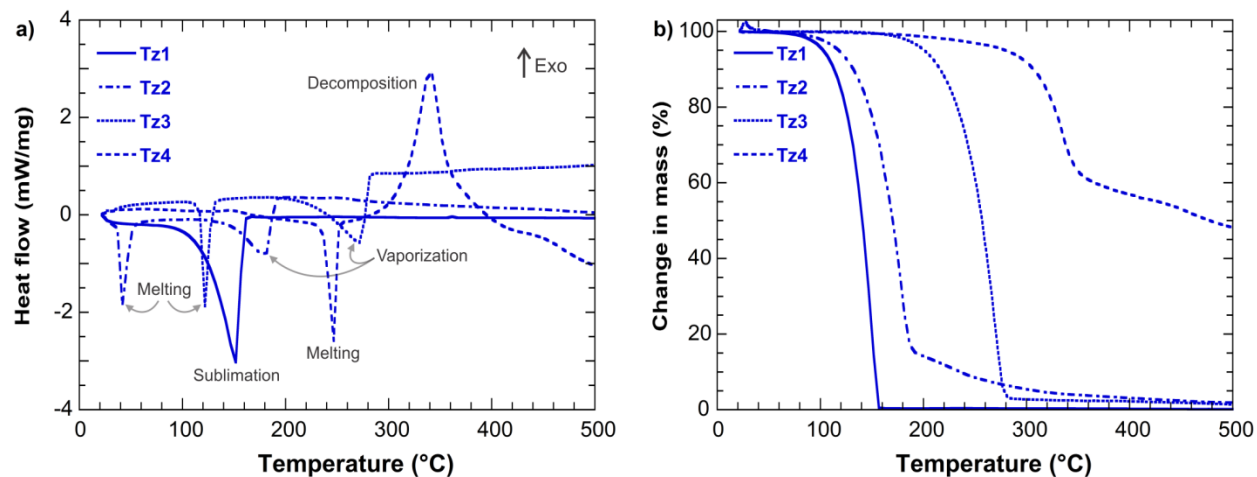


Figure SI-3: (a) DSC and (b) TG charts for the pure tetrazines (**Tz1**, **Tz2**, **Tz3**, and **Tz4**).

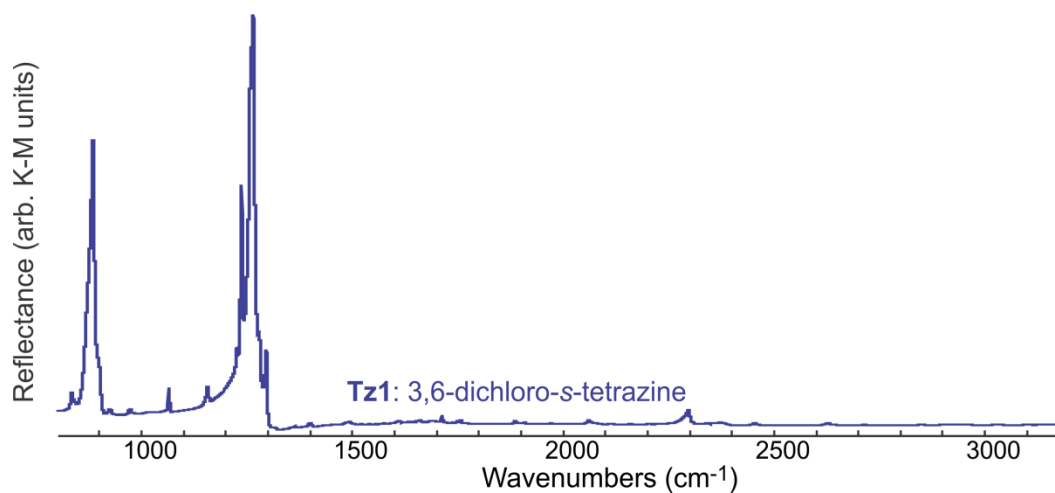


Figure SI-4: FTIR spectrum for **Tz1**. The C-Cl band is apparent at  $\sim 890\text{ cm}^{-1}$  and the absorptions of the C-N ring centered at  $\sim 1250\text{ cm}^{-1}$ .

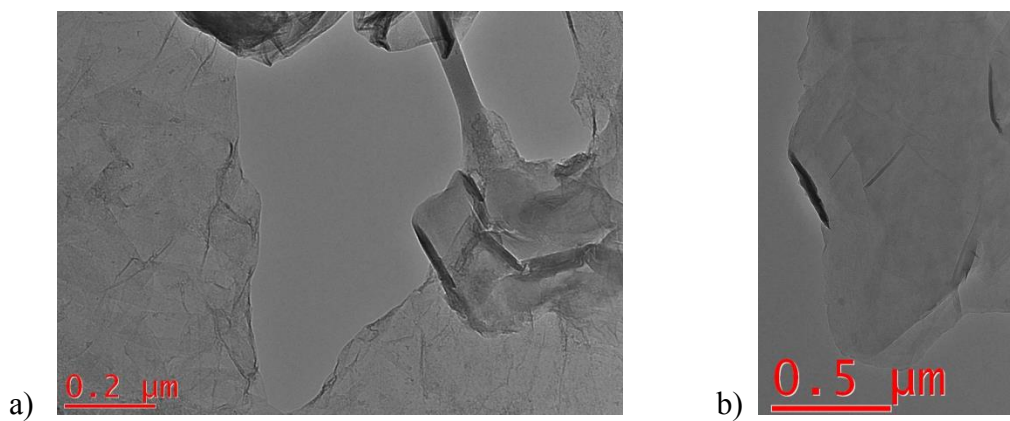


Figure SI-5: TEM pictures of **FGS<sub>2</sub>** (a) and **FGS-Tz4** (b) showing that the graphene structure is preserved in the tetrazine functionalized material.