Electronic Supplementary Information for

Post Nitrogen Enrichment of Soft-Templated Ordered Mesoporous Carbon Materials for Highly Efficient Phenol Removal and CO_2 Capture

Zhangxiong Wu,[a,b] Paul A Webley,*[a] and Dongyuan Zhao*[a,b]

[a] Department of Chemical Engineering, Faculty of Engineering, Monash University, Melbourne 3800, Australia. E-mail: paul.webley@monash.edu

[b] Department of Chemistry and Advanced Materials Laboratory, Fudan University, Shanghai 200438, P. R. China. Fax: +86-21-51630307; Tel: +86-21-51630205; E-mail: dyzhao@fudan.edu.cn

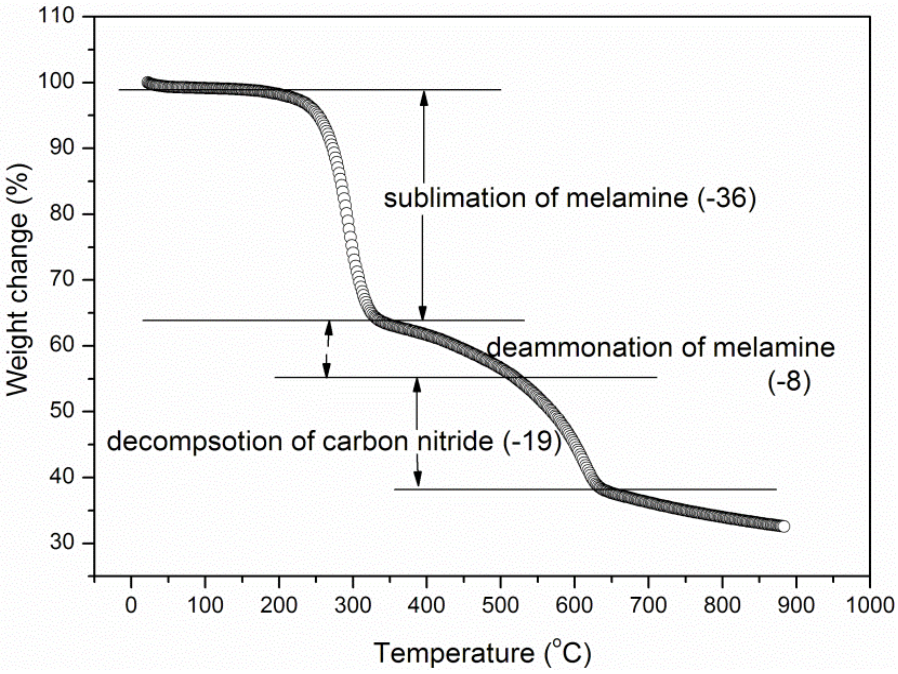

Fig. S1 Details of the TG curve of the as-prepared pristine mesoporous carbon and melamine composite with a mass ration of ~ 1: 1.5.

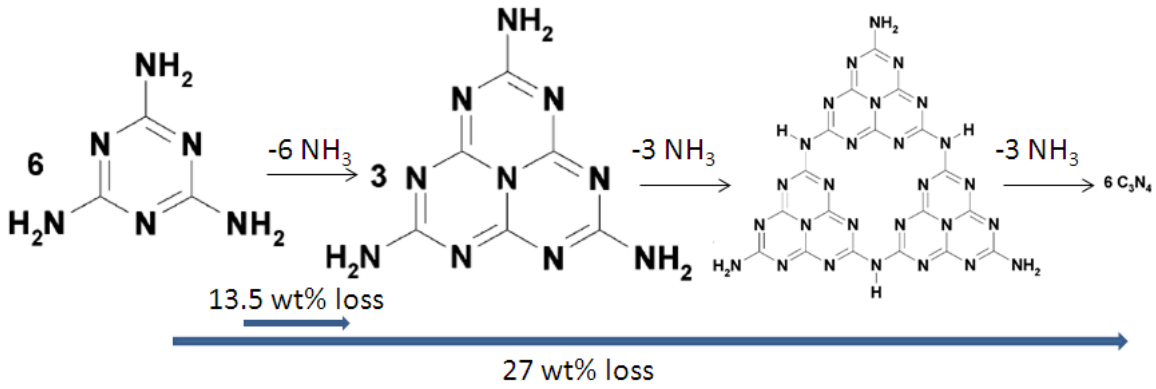

Fig. S2 Condensation pathways of melamine to carbon nitride (adapted from Ref. S1)

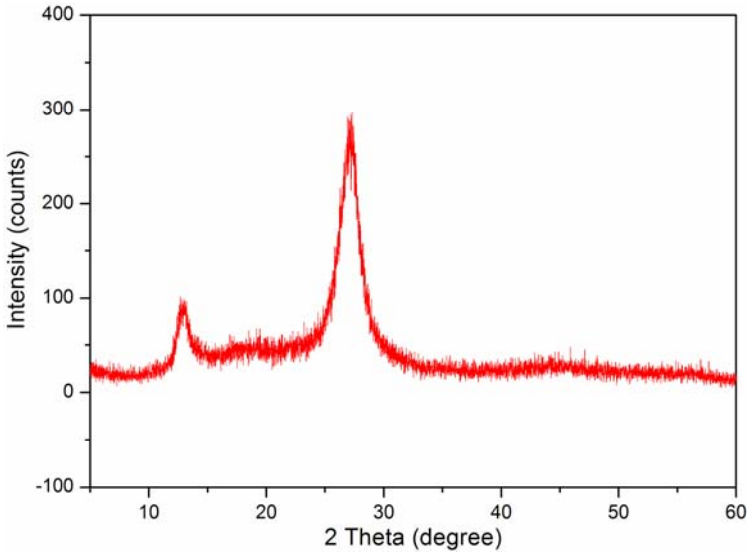

Fig. S3 Wide-angle XRD pattern of the carbon nitrde product obtained by heating melamine to 500 °C and keeping isothermal for 1 h (the identical experimental coditions as those for the preparation of N-OMC-500)

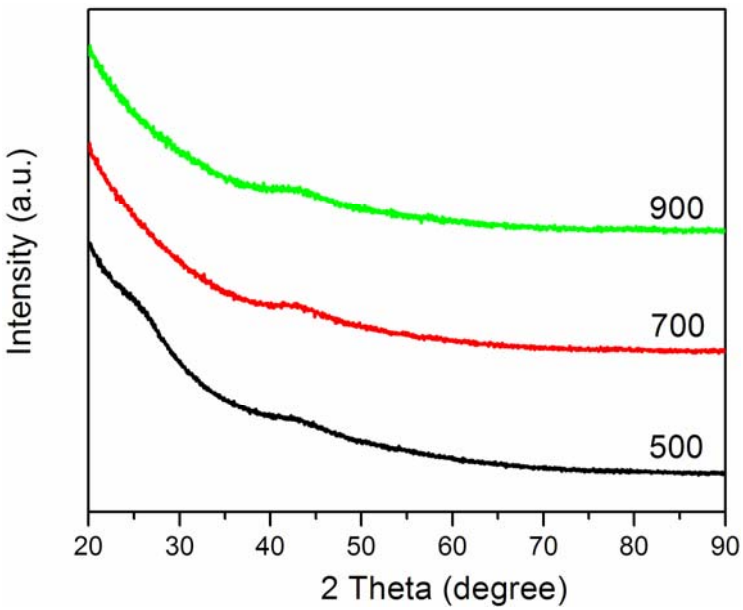

Fig. S4 Wide-angle XRD patterns of the ordered mesoporous nitrogen-containing carbon N-OMC-T obtained by calcining the melamine/carbon composite at 500 ~ 900 °C.

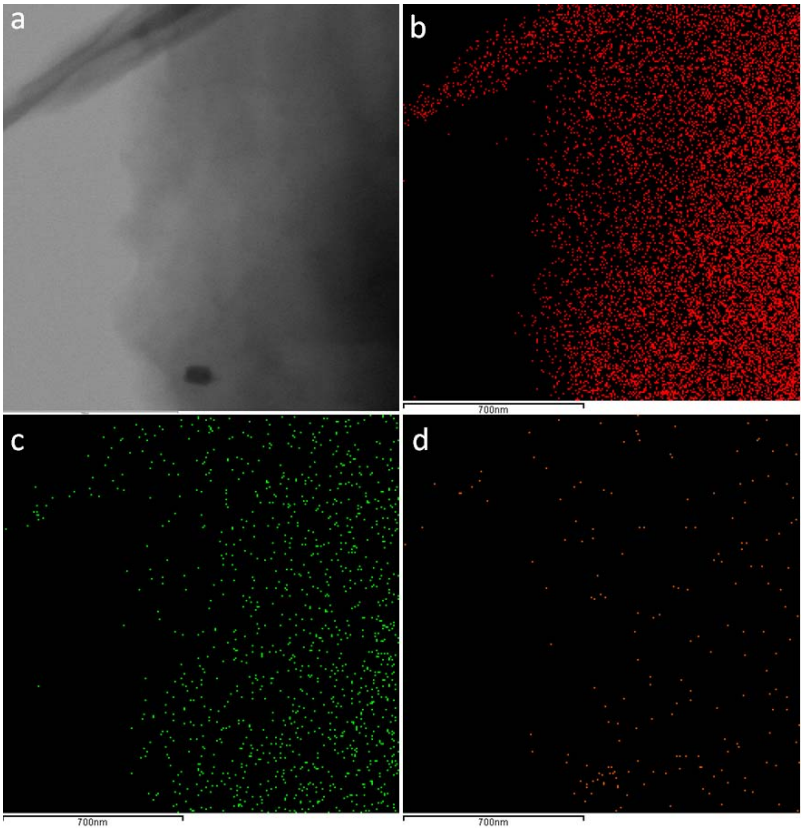

Fig. S5 The DF-STEM image (a) and the corresponding C (b), N (c) and O (d) elemental maps of the ordered mesoporous nitrogen-containing carbon N-OMC-700.

Supporting references

S1. B. Jürgens, E. Irran, J. Senker, P. Kroll, H. Müller, and W. Schnick, *J. Am. Chem. Soc.* 2003, **125**, 10288.