### Accepted Manuscript

Engineering the surface of a new class of adsorbents: Metal-organic framework/ graphite oxide composites

Camille Petit, Teresa J. Bandosz

PII:	S0021-9797(14)00583-9
DOI:	http://dx.doi.org/10.1016/j.jcis.2014.08.026
Reference:	YJCIS 19761
To appear in:	Journal of Colloid and Interface Science
Received Date:	30 May 2014
Accepted Date:	13 August 2014



Please cite this article as: C. Petit, T.J. Bandosz, Engineering the surface of a new class of adsorbents: Metal-organic framework/graphite oxide composites, *Journal of Colloid and Interface Science* (2014), doi: http://dx.doi.org/10.1016/j.jcis.2014.08.026

This is a PDF file of an unedited manuscript that has been accepted for publication. As a service to our customers we are providing this early version of the manuscript. The manuscript will undergo copyediting, typesetting, and review of the resulting proof before it is published in its final form. Please note that during the production process errors may be discovered which could affect the content, and all legal disclaimers that apply to the journal pertain.

## **ACCEPTED MANUSCRIPT**

## Engineering the surface of a new class of adsorbents:

Metal-organic framework/graphite oxide composites

Camille Petit<sup>a</sup> and Teresa J. Bandosz<sup>b</sup>\*

<sup>a</sup> Department of Chemical Engineering, Imperial College London, South Kensington Campus, London SW7 2AZ, UK

<sup>b</sup> Department of Chemistry, The CUNY Energy Institute, The City College of New York, 160 Convent Ave, New York, NY 10031, USA

#### ABSTRACT

This paper reviews the results of several prior studies to highlight how the concept of the Metalorganic framework/Graphite oxide (MOF/GO) composites was developed towards their application as separation media for small molecule gases at ambient conditions. The studies are analyzed from a surface engineering standpoint. The MOF /GO composites have been developed considering both the advantages and drawbacks of the composite components: MOF provided a high porosity and reactive centers and GO a dense array of carbon atoms to increase dispersive interactions. The resulting materials showed a significant enhancement in porosity owing to the

<sup>&</sup>lt;sup>\*</sup> Whom correspondence should be addressed to. Tel.: (212)650-6017; Fax: (212)650-6107; E-mail: tbandosz@ccny.cuny.edu

Download English Version:

# https://daneshyari.com/en/article/606806

Download Persian Version:

https://daneshyari.com/article/606806

Daneshyari.com