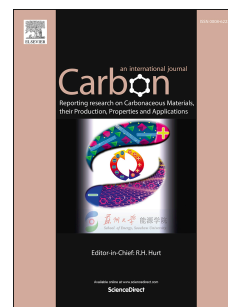


# Accepted Manuscript

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PII: S0008-6223(15)30236-0

DOI: [10.1016/j.carbon.2015.09.017](https://doi.org/10.1016/j.carbon.2015.09.017)

Reference: CARBON 10287

To appear in: *Carbon*

Received Date: 18 June 2015

Revised Date: 13 August 2015

Accepted Date: 2 September 2015

Please cite this article as: S. Wang, A. Morelos-Gómez, Z. Lei, M. Terrones, K. Takeuchi, W. Sugimoto, M. Endo, K. Kaneko, Correlation in Structure and Properties of Highly-porous Graphene Monoliths Studied with a Thermal Treatment Method, *Carbon* (2015), doi: 10.1016/j.carbon.2015.09.017.

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# Correlation in Structure and Properties of Highly-porous Graphene Monoliths Studied with a Thermal Treatment Method

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**Abstract:** We prepared high surface area nanoporous graphene by reduction and KOH activation of graphene oxides and then heat-treated the nanoporous graphene up to 3073 K in Ar. The surface area of thus-prepared samples decreased remarkably from 1560 m<sup>2</sup>g<sup>-1</sup> to 10 m<sup>2</sup>g<sup>-1</sup> according to the subtracting pore effect (SPE) method. The transmission electron microscopic (TEM), X-ray diffraction (XRD), Raman spectroscopy and N<sub>2</sub> adsorption isotherms at 77.4 K clearly illustrate the evolution of morphology, crystallinity and porosity during the graphitization

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