# Article information:

Thermally reduced graphenes exhibiting a close relationship to amorphous carbon - Nanoscale (RSC Publishing)  
<https://pubs.rsc.org/en/content/articlelanding/2012/nr/c2nr30989k/unauth>

# Article summary:

1. Thermally reduced graphene oxide (TRGO) is commonly used in sensing and energy storage applications due to its availability in bulk quantities.

2. TRGO has a heavily damaged sp2 planar structure, consisting of a very short sp2 crystallite size of nanometre length and with areas of sp3 hybridized carbon, similar to the structure of amorphous carbon.

3. Characterization of TRGO, its parent graphite material and carbon black (a form of amorphous carbon) was performed via transmission electron microscopy, Raman spectroscopy, X-ray photoelectron spectroscopy (XPS) and cyclic voltammetry experiments to compare their relative electrochemical performances.

# Article rating:

Appears moderately imbalanced: The article provides some useful information, but is missing several important points or pieces of evidence that would be required to present the discussed topics in a balanced and reliable way. You are encouraged to seek a more balanced perspective on the presented issues by exploring the provided research topics and looking at different information sources.

# Article analysis:

The article is generally reliable and trustworthy as it provides evidence for the claims made through characterization techniques such as transmission electron microscopy, Raman spectroscopy, X-ray photoelectron spectroscopy (XPS) and cyclic voltammetry experiments. The article also provides an objective comparison between thermally reduced graphene oxide (TRGO) and amorphous carbon in terms of their relative electrochemical performances.

However, there are some potential biases that should be noted when reading this article. For example, the authors do not explore any counterarguments or alternative perspectives on the use of TRGO versus amorphous carbon for sensing and energy storage applications. Additionally, the authors do not discuss any possible risks associated with using either material for these applications. Furthermore, the article does not present both sides equally; instead it focuses mainly on the advantages of using TRGO over amorphous carbon without providing an equal amount of information about the disadvantages or drawbacks associated with each material. Finally, there is no mention of any promotional content or partiality in the article which could potentially influence readers’ opinions about either material.

# Topics for further research:

* Disadvantages of thermally reduced graphene oxide
* Risks associated with using amorphous carbon
* Alternative perspectives on TRGO and amorphous carbon
* Promotional content related to TRGO and amorphous carbon
* Partiality in research on TRGO and amorphous carbon
* Comparison of electrochemical performances of TRGO and amorphous carbon

# Report location:

<https://www.fullpicture.app/item/4c4e6ba845b01d80ff499610b722258a>