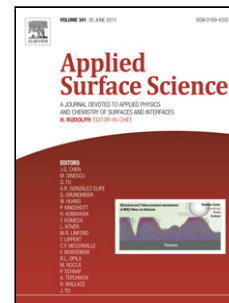


Accepted Manuscript

Title: Effect of hydrothermal reaction time and alkaline conditions on the electrochemical properties of reduced graphene oxide

Author: E.C. Vermisoglou T. Giannakopoulou G. Romanos
M. Giannouri N. Boukos C. Lei C. Lekakou C. Trapalis



PII: S0169-4332(15)01940-6
DOI: <http://dx.doi.org/doi:10.1016/j.apsusc.2015.08.127>
Reference: APSUSC 31074

To appear in: *APSUSC*

Received date: 24-7-2015
Revised date: 12-8-2015
Accepted date: 15-8-2015

Please cite this article as: E.C. Vermisoglou, T. Giannakopoulou, G. Romanos, M. Giannouri, N. Boukos, C. Lei, C. Lekakou, C. Trapalis, Effect of hydrothermal reaction time and alkaline conditions on the electrochemical properties of reduced graphene oxide, *Applied Surface Science* (2015), <http://dx.doi.org/10.1016/j.apsusc.2015.08.127>

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.

Effect of hydrothermal reaction time and alkaline conditions on the electrochemical properties of reduced graphene oxide

E.C. Vermisoglou¹, T. Giannakopoulou¹, G. Romanos¹, M. Giannouri¹, N. Boukos¹,
C. Lei², C. Lekakou², C. Trapalis^{1*}

¹*Institute of Nanoscience and Nanotechnology (INN), NCSR “Demokritos”, 153 43,
Ag. Paraskevi, Attikis, Greece*

²*Division of Mechanical, Medical, and Aerospace Engineering, Faculty of
Engineering and Physical Sciences, University of Surrey, Guildford GU2 7XH, UK*
**c.trapalis@inn.demokritos.gr*

Keywords: graphene, reduced graphene oxide, hydrothermal, supercapacitor, electrochemical properties, pH, alkaline conditions.

Highlights

- Simultaneous reduction and exfoliation of GtO via hydrothermal treatment.
- Effect of hydrothermal reaction time on the electrochemical properties of rGO.
- Effect of alkaline pH on microporosity and electrochemical properties of rGO.
- Capacitance of rGO materials in aqueous and organic electrolytes.
- Manipulation of rGO electrochemical properties in aqueous and organic electrolytes.

Abstract

Download English Version:

<https://daneshyari.com/en/article/5357774>

Download Persian Version:

<https://daneshyari.com/article/5357774>

[Daneshyari.com](https://daneshyari.com)