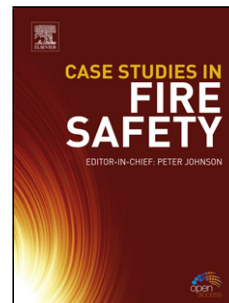


Accepted Manuscript

Title: Rapid colorimetric analysis of graphene on copper

Authors: Aaditya A. Candadai, Anurag Kumar, Majed A. Alrefae, Dmitry Zemlyanov, Timothy S. Fisher

PII: S0010-938X(17)32015-2
DOI: <https://doi.org/10.1016/j.corsci.2018.04.019>
Reference: CS 7485



To appear in:

Received date: 8-11-2017
Revised date: 9-4-2018
Accepted date: 13-4-2018

Please cite this article as: Candadai AA, Kumar A, Alrefae MA, Zemlyanov D, Fisher TS, Rapid colorimetric analysis of graphene on copper, *Corrosion Science* (2010), <https://doi.org/10.1016/j.corsci.2018.04.019>

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.

Rapid colorimetric analysis of graphene on copper

Aaditya A. Candadai^{1,2}, Anurag Kumar^{1,2}, Majed A. Alrefae^{1,2}, Dmitry Zemlyanov¹, Timothy S. Fisher^{1,2,3#}

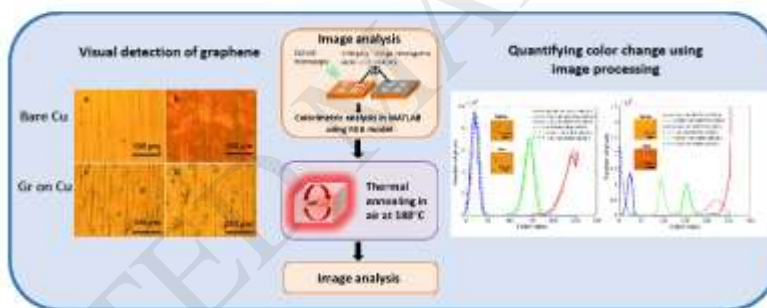
¹ Birck Nanotechnology Center, Purdue University, West Lafayette, IN US

² School of Mechanical Engineering, Purdue University, West Lafayette, IN US

³ Current address: UCLA Department of Mechanical & Aerospace Engineering, Los Angeles, CA USA

Corresponding author. Email: tsfisher@ucla.edu, Tel: +1 310-206-8113

Graphical abstract



Highlights

- A colorimetric-based characterization method for large-area graphene is proposed.
- The method exploits graphene's short-term corrosion protection of copper surfaces.
- Optical microscopy and image processing are used to quantify graphene presence.
- Raman spectroscopy and XPS measurements are used to validate the proposed method.

Abstract

Download English Version:

<https://daneshyari.com/en/article/7893411>

Download Persian Version:

<https://daneshyari.com/article/7893411>

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