

## Accepted Manuscript

Reduced polyaniline decorated reduced graphene oxide/polyimide nanocomposite films with enhanced dielectric properties and thermostability

Hao Feng, Xinliang Fang, Xiaoyun Liu, Qibing Pei, Zhong-Kai Cui, Shifeng Deng, Jinlou Gu, Qixin Zhuang

PII: S1359-835X(18)30137-4

DOI: <https://doi.org/10.1016/j.compositesa.2018.03.035>

Reference: JCOMA 4992

To appear in: *Composites: Part A*

Received Date: 3 January 2018

Revised Date: 29 March 2018

Accepted Date: 31 March 2018

Please cite this article as: Feng, H., Fang, X., Liu, X., Pei, Q., Cui, Z-K., Deng, S., Gu, J., Zhuang, Q., Reduced polyaniline decorated reduced graphene oxide/polyimide nanocomposite films with enhanced dielectric properties and thermostability, *Composites: Part A* (2018), doi: <https://doi.org/10.1016/j.compositesa.2018.03.035>

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.



**Reduced polyaniline decorated reduced graphene oxide/polyimide nanocomposite  
films with enhanced dielectric properties and thermostability**

Hao Feng <sup>a</sup>, Xinliang Fang <sup>a</sup>, Xiaoyun Liu <sup>a</sup>, Qibing Pei <sup>b</sup>, Zhong-Kai Cui <sup>c</sup>, Shifeng Deng <sup>a,\*</sup>, Jinlou Gu <sup>a</sup>, Qixin Zhuang <sup>a,\*\*</sup>

<sup>a</sup> Key Laboratory of Advanced Polymer Materials of Shanghai, School of Materials Science and Engineering, East China University of Science and Technology, Shanghai 200237, China.

<sup>b</sup> Soft Materials Research Laboratory, Department of Materials Science and Engineering, University of California, Los Angeles, Los Angeles, California 90095, United States

<sup>c</sup> Department of Chemistry, Université de Montréal, C.P. 6128, Succ. Centre Ville, Montréal, Québec, H3C 3J7, Canada.

\* Corresponding author.      \*\* Corresponding author.

E-mail addresses: qxzhuang@ecust.edu.cn (Qixin Zhuang); sfdeng@ecust.edu.cn (Shifeng Deng)

**Abstract**

This study reports the synthesis and characterization of reduced polyaniline decorated reduced graphene oxide/polyimide (RGO@R-PANI/PI) nanocomposite films with enhanced dielectric properties and thermostability. The steric effects of R-PANI decorated on the surface of RGO not only prevented the aggregation of RGO but also improved the dispersion of RGO@R-PANI nanosheets in the PI matrix, leading to higher dielectric constant ( $\epsilon$ ) and lower dielectric loss ( $\tan\delta$ ) of the RGO@R-PANI/PI

Download English Version:

<https://daneshyari.com/en/article/7889830>

Download Persian Version:

<https://daneshyari.com/article/7889830>

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