

Accepted Manuscript

Title: RGO/BaFe₁₂O₁₉/Fe₃O₄ nanocomposite as microwave absorbent with lamellar structures and improved polarization interfaces

Authors: Shangqing Jiao, Mingzai Wu, Xinxin Yu, Haibo Hu, Zhiman Bai, Peng Dai, Tongtong Jiang, Hong Bi, Guang Li



PII: S0025-5408(18)30180-6
DOI: <https://doi.org/10.1016/j.materresbull.2018.08.014>
Reference: MRB 10135

To appear in: *MRB*

Received date: 17-1-2018
Revised date: 4-8-2018
Accepted date: 7-8-2018

Please cite this article as: Jiao S, Wu M, Yu X, Hu H, Bai Z, Dai P, Jiang T, Bi H, Li G, RGO/BaFe₁₂O₁₉/Fe₃O₄ nanocomposite as microwave absorbent with lamellar structures and improved polarization interfaces, *Materials Research Bulletin* (2018), <https://doi.org/10.1016/j.materresbull.2018.08.014>

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.

RGO/BaFe₁₂O₁₉/Fe₃O₄ nanocomposite as microwave absorbent with lamellar structures and improved polarization interfaces

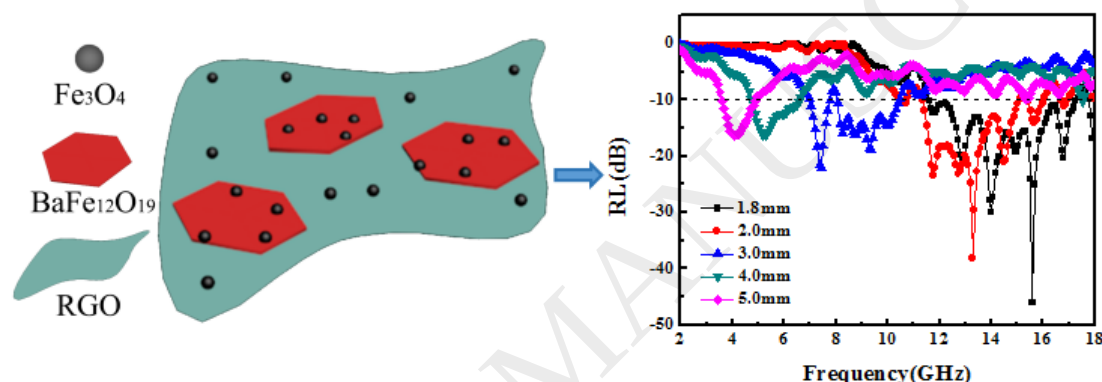
Shangqing Jiao¹, Mingzai Wu^{1*}, Xinxin Yu^{1*}, Haibo Hu¹, Zhiman Bai¹, Peng Dai¹,
Tongtong Jiang¹, Hong Bi², Guang Li¹

¹ School of Physics and Materials Science, Anhui University Hefei 230601 (China)

² School of Chemistry and Chemical Engineering, Anhui University Hefei 230601 (China)

Corresponding author. E-mail addresses: wumz@ustc.edu.cn (M. Wu), xiny@ahu.edu.cn (X. Yu).

Graphical abstract



Highlights

- RGO/BaFe₁₂O₁₉/Fe₃O₄ nanocomposite are prepared via a two-step solvothermal method.
- The maximum reflection loss can reach -46.04dB at 15.6GHz with the thickness of 1.8mm, and the effective absorption bandwidth under -10dB is 5.68GHz.
- Interfacial polarization as one of the mechanism for the enhanced absorption properties was detailedly analyzed.

Abstract

In this paper, we designed and prepared a composite of BaFe₁₂O₁₉ (BFO) flakes, two-dimensional graphene and Fe₃O₄ nanoparticles using a two-step solvothermal method. The combination of BFO flakes and two-dimensional graphene could

Corresponding author. E-mail addresses: wumz@ustc.edu.cn (M. Wu), xiny@ahu.edu.cn (X. Yu).

Download English Version:

<https://daneshyari.com/en/article/10141803>

Download Persian Version:

<https://daneshyari.com/article/10141803>

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