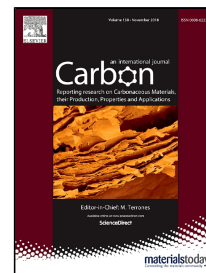


Accepted Manuscript

Thermal Rectification in Y-junction Carbon Nanotube Bundle

Adili Aiyiti, Zhongwei Zhang, Bensong Chen, Shiqian Hu, Jie Chen, Xiangfan Xu,
Baowen Li



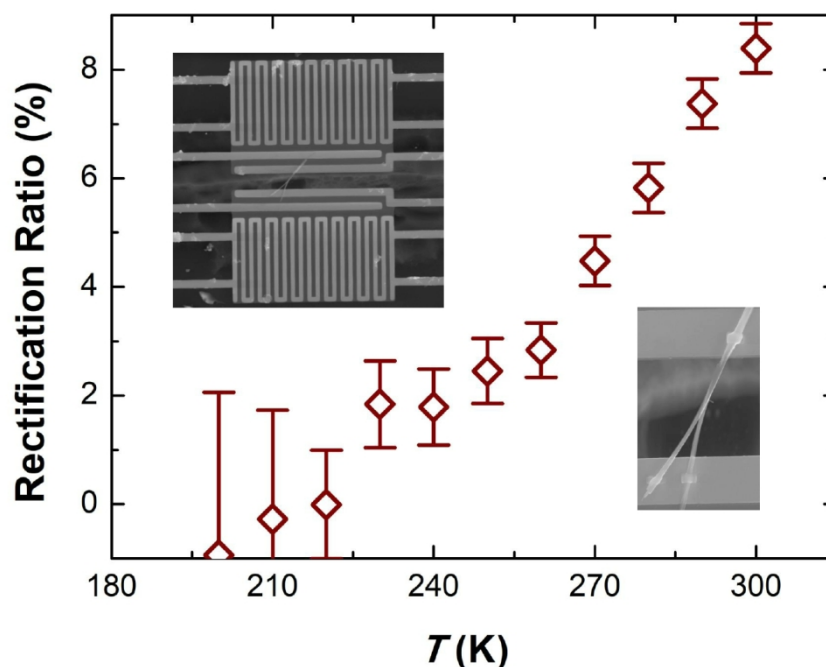
PII: S0008-6223(18)30810-8
DOI: 10.1016/j.carbon.2018.09.002
Reference: CARBON 13430
To appear in: *Carbon*
Received Date: 03 May 2018
Accepted Date: 01 September 2018

Please cite this article as: Adili Aiyiti, Zhongwei Zhang, Bensong Chen, Shiqian Hu, Jie Chen, Xiangfan Xu, Baowen Li, Thermal Rectification in Y-junction Carbon Nanotube Bundle, *Carbon* (2018), doi: 10.1016/j.carbon.2018.09.002

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.

Thermal Rectification in Y-junction Carbon Nanotube Bundle

Adili Aiyiti, Zhongwei Zhang, Bensong Chen, Shiqian Hu, Jie Chen, Xiangfan Xu, Baowen Li



Thermal rectification vs. temperature

Thermal rectification in Y-junction carbon nanotube is demonstrated in Y-junction CNT. The observed thermal rectification of $\sim 8.3\% \pm 0.5\%$ with $\Delta T=4\text{K}$ and $\sim 12.0\% \pm 0.4\%$ with $\Delta T=17.5\text{K}$ in the Y-junction CNT bundle is the highest among the carbon materials, which is attributed to asymmetric phonon transmission in different (forward and backward) directions as suggested by our molecular dynamics (MD) simulation.

Download English Version:

<https://daneshyari.com/en/article/10128320>

Download Persian Version:

<https://daneshyari.com/article/10128320>

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