Author's Accepted Manuscript

A new approach for ultrahigh-performance piezoresistive sensor based on wrinkled PPy film with electrospun PVA nanowires as spacer

Cheng Luo, Nishuang Liu, Hang Zhang, Weijie Liu, Yang Yue, Siliang Wang, Jiangyu Rao, Congxing Yang, Jun Su, Xueliang Jiang, Yihua Gao



PII: S2211-2855(17)30611-0 DOI: https://doi.org/10.1016/j.nanoen.2017.10.007 Reference: NANOEN2241

To appear in: Nano Energy

Received date:10 August 2017Revised date:20 September 2017Accepted date:2 October 2017

Cite this article as: Cheng Luo, Nishuang Liu, Hang Zhang, Weijie Liu, Yang Yue, Siliang Wang, Jiangyu Rao, Congxing Yang, Jun Su, Xueliang Jiang and Yihua Gao, A new approach for ultrahigh-performance piezoresistive sensor based on wrinkled PPy film with electrospun PVA nanowires as spacer, *Nano Energy*, https://doi.org/10.1016/j.nanoen.2017.10.007

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 galley proof before it is published in its final citable 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.

ACCEPTED MANUSCRIPT

A new approach for ultrahigh-performance piezoresistive sensor based on wrinkled PPy film with electrospun PVA nanowires as spacer

Cheng Luo,^a Nishuang Liu,^{a,*} Hang Zhang,^a Weijie Liu,^a Yang Yue,^a Siliang Wang,^a Jiangyu Rao,^a Congxing Yang,^a Jun Su,^a Xueliang Jiang,^b Yihua Gao^{a,c,*}

^a Center for Nanoscale Characterization & Devices (CNCD), Wuhan National Laboratory for Optoelectronics (WNLO) & School of Physics, Huazhong University of Science and Technology (HUST), LuoyuRoad 1037, Wuhan 430074, P.R. China

^b School of Material Science and Engineering, Wuhan Institute of Technology, Wuhan 430205, P. R. China

^c College of Physics Science & Technology, Guangxi University, Daxue Road 100, Nanning 530004, P. R. China

^{*}Corresponding email: nishuang_liu@foxmail.com; gaoyihua@hust.edu.cn

ABSTRACT

Pressure sensor with high sensitivity is desirable for it's vast application in fields like wearable electronics and human-machine interface. Here, we report a simple but rarely investigated approach to fabricate amazing high sensitivity pressure sensors by using PVA nanowires as spacer between active materials. On one hand, Polyvinyl Alcohol (PVA) nanowire (PVANW)

Download English Version:

https://daneshyari.com/en/article/5451797

Download Persian Version:

https://daneshyari.com/article/5451797

Daneshyari.com