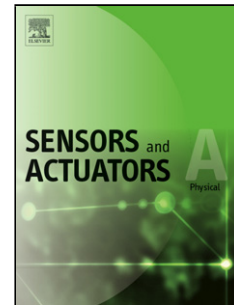


Accepted Manuscript

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PII: S0924-4247(17)30564-2
DOI: <http://dx.doi.org/10.1016/j.sna.2017.09.026>
Reference: SNA 10334

To appear in: *Sensors and Actuators A*

Received date: 31-3-2017
Revised date: 26-8-2017
Accepted date: 11-9-2017

Please cite this article as: Saman Azhari, Amin Termeh Yousefi, Hirofumi Tanaka, Amin Khajeh, Nico Kuredemus, Mani Mansouri Bigdeli, Mohd Nizar Hamidon, Fabrication of Piezoresistive Based Pressure Sensor via Purified and Functionalized CNTs/PDMS Nanocomposite: Toward Development of Haptic Sensors, *Sensors and Actuators: A Physical* <http://dx.doi.org/10.1016/j.sna.2017.09.026>

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Fabrication of Piezoresistive Based Pressure Sensor via Purified and Functionalized CNTs/PDMS Nanocomposite: Toward Development of Haptic Sensors

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Graphical abstract

Fabrication of Piezoresistive based Pressure Sensor via Purified and Functionalized CNTs/PDMS Nanocomposite: toward development of haptic sensors

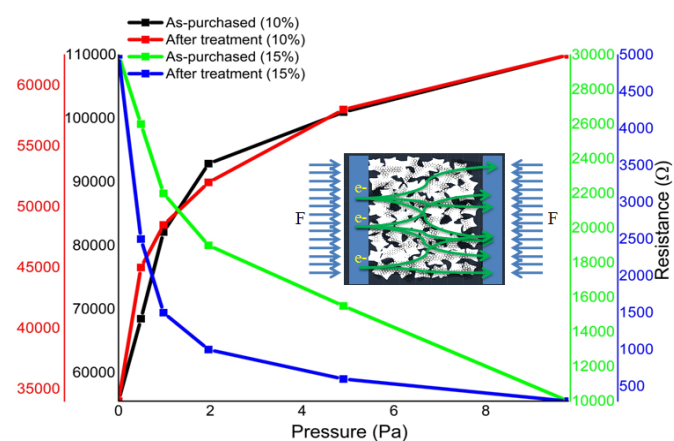
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The effect of pressure and the range of resistance in nanocomposites could vary drastically depending on the treatment of nanomaterials prior to fabrication.

Highlights:

- The importance of purification for higher quality of CNTs
- The importance of functionalization for homogenous dispersion of CNTs in PDMS.
- The significance of processing CNTs prior to use, on the electrical properties and range of output signal and lowering the percolation threshold.
- Increase in CNTs weight fraction results in decrease in electrical resistance as a function of pressure in nanocomposite, at above 15wt%.
- Better understanding the mechanism and nature of CNTs/PDMS nanocomposite.

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