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Current Nanoscience
Volume 15, Issue 4, 2019, Pages 328-353

A review on micro-patterning processes of vertically aligned carbon nanotubes array (VACNTs array) (Review)

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Abstract

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Vertically Aligned Carbon Nanotubes array which is also sometimes labeled as carbon nanotubes forests has many applications in several engineering fields for its remarkable mechanical, electrical, optical, and thermal properties. The Vertically Aligned Carbon Nanotubes array is often employed in developing microdevices such as pressure sensor, angle sensor, switches, etc. To successfully integrate carbon nanotubes forest to the micro-electro-mechanical systems based devices, micropatterning of the carbon nanotubes forest is required. There are several methods available to realize micropatterning of Vertically Aligned Carbon Nanotubes array, from in-situ patterning during the growth process to post-patterning process. Each has its advantages and disadvantages. This paper will discuss elaborately different patterning processes of the carbon nanotubes forest and their different characteristics. © 2019 Bentham Science Publishers.

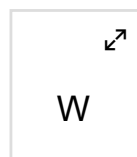
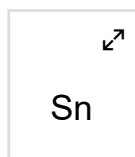
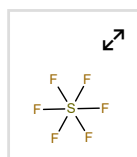
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Funding sponsor	Funding number	Acronym
Ministry of Higher Education, Malaysia	PRGS16-008-0039	MOHE

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This work was supported by MOHE(PRGS16-008-0039).

ISSN: 15734137

Source Type: Journal

Original language: English

DOI: 10.2174/1573413714666180813110942

Document Type: Review

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