

Accepted Manuscript

Influence of Van der Waals Forces on Elastic and Buckling Characteristics of Vertically Aligned Carbon Nanotubes

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PII: S0020-7403(18)31645-X
DOI: <https://doi.org/10.1016/j.ijmecsci.2018.07.032>
Reference: MS 4444



To appear in: *International Journal of Mechanical Sciences*

Received date: 22 May 2018
Revised date: 10 July 2018
Accepted date: 24 July 2018

Please cite this article as: Aparna Gangele, Sathish Kumar Garala, Ashok Kumar Pandey, Influence of Van der Waals Forces on Elastic and Buckling Characteristics of Vertically Aligned Carbon Nanotubes, *International Journal of Mechanical Sciences* (2018), doi: <https://doi.org/10.1016/j.ijmecsci.2018.07.032>

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Highlights

- FEM based model with and without van der Waals interaction is developed and validated for SWCNTs and DWCNTs.
- FEM modeling of VACNTs with and without van der Waals forces are presented.
- Influence of arrays size of VACNTs on elastic modulus is studied.
- Influence of arrays size, intertube spacing and tube diameter on buckling strength of VACNTs is studied.

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