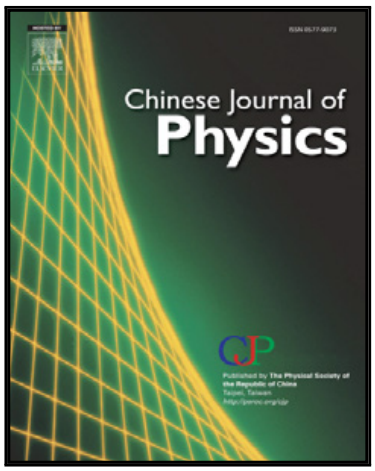

A new approach to the evaluation of Casimir and van der Waals forces in the transition region

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PII: S0577-9073(17)31344-8
DOI: 10.1016/j.cjph.2018.04.006
Reference: CJPH 500

To appear in: *Chinese Journal of Physics*

Received date: 21 October 2017
Revised date: 7 April 2018
Accepted date: 8 April 2018

Please cite this article as: Shakiba Dowlati , Ghader Rezazadeh , A new approach to the evaluation of Casimir and van der Waals forces in the transition region, *Chinese Journal of Physics* (2018), doi: 10.1016/j.cjph.2018.04.006

Highlights

- A proportion of Casimir and van der Waals forces is considered in the transition area
- A mathematical model is proposed to consider forces based on their domination region
- Any point of plate may be exposed to Casimir, van der Waals or a proportion of them
- The effect of nonlocal parameters on the mechanical behavior of nanoplate is studied