

ON VAN DER WAALS INTERACTION BETWEEN TWO CONDUCTING FINITE-LENGTH NANOWIRES WITH MIRROR-LIKE ARRANGEMENT

Van der Waals interactions between nanoparticles have recently become area of the great interest. They govern the way in which nanoparticles self-assembly into ordered structures [1-3] and play significant role in catalysis and nanomechanics. Interactions between infinite-length nanowires are well studied [4-5], but there is lack of works which examine finite-length nanowires. Our previous study [6] used Luttinger liquid model [7] and was focused on van der Waals interactions between conducting finite-length nanowire and the surface. In this work we use same approach to examine how van der Waals energy between two conducting finite-length nanowires with same size and mirror-like arrangement depend on distance to length ratio.

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