

Abstract Submitted  
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**Optical forces in a cluster of cylinders.**<sup>1</sup> JINYING XU, Fuzhou University — We present a rigorous multiple-scattering method to calculate the optical force exerted on a cylinder placed near a cluster of parallel cylinders. Various kinds of cluster structure with both dielectric and left-hand materials are considered. It is shown that optical forces are sensitive to the position of the test cylinder, the material of the cylinders in the cluster or the structure of the system. The optical force is strong within frequency bands corresponding to surface-plasmon excitations of the cylinders.

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