**ABSTRACT**

The intensity distribution in the focal region of a high NA parabolic mirror for the incident azimuthally polarized doughnut Gaussian vortex beam (DGVB) transmitted through a multi belt complex phase filter (MBCF) is studied using vector diffraction theory. By properly designing the phase of the incident beam using MBCF and by tuning the beam parameters of a DGVB, it is possible to switch the focal spot with sub wavelength dimension and long focal depth in to multiple focal spots suitable for particle acceleration, atom optical experiments, and near-field scanning optical microscopy.