**ABSTRACT**

 In recent years, an Axi-symmetric Bessel-modulated Gaussian beam with quadratic radial dependence (QBG beam) has attracted very much. Based on vectorial Debye theory, the tightly focusing properties of spirally polarised QBG beam with spiral phase variance wavefront through a dielectric interface are studied. The the intensity distribution in the focal region is investigated in detail by numerical calculations. the wavefront phase distribution is cosine function of spiral coordinate. The simulation results show that the intensity distribution in focal region of the spirally polarized QBG beam can be adjusted considerably buy parameter d and phase parameter C. On increasing C, the focus can shift along optical axis and focal pattern changes remarkably. when d increases, the focal spot may change to focal hole that also shift remarkably on increasing C. Focal shift distance fluctuates on increasing C, and fluctuating amplitude also changes simultaneously. in this paper, the intensity distribution of the light beams in the focal region is investigated in detail by performing numerical calculations. The intensity distributions in focal region of the spirally polarised QBG beams are calculated under condition of d=1 and different C. It is seen that there is one focal spot in focal region for C from 0 to 0.6, the focal spot starts splitting. On increasing C to 0.9, the system generates a focal hole.