**ABSTRACT**

Focusing properties of circularly polarized annular multi-Gaussian beams through a uniaxial birefringent crystal is investigated numerically by vectorial Debye theory. Results show that the optical intensity in focal region of circularly polarized annular multi-Gaussian beams can be altered considerably by the topological charge [n], beam order [m] and birefringence [Δn]. Many novel focal structures such as focal spot, focal hole and flat top profile of sub wavelength structure are achieved.