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(54) **DIELECTRIC CYLINDRICAL LENS AND DIELECTRIC FILM, FABRICATION METHOD OF DIELECTRIC CYLINDRICAL LENS**

(71) Applicant: **BEIJING HIGH WAY TELECOMMUNICTION TECHNOLOGY CO., LTD.**, Beijing (CN)

(72) Inventors: **Chenxi LV**, Beijing (CN); **Wei HUANG**, Beijing (CN)

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(57) **ABSTRACT**

The invention discloses a kind of dielectric cylindrical lens, dielectric film and fabrication method of dielectric cylindrical lens, which solves the problems of poor parameter consistency, large scattering and much two-way communication interference of the existing antennas. A dielectric cylindrical lens, whose lens structure is a cylinder concentrically wound by dielectric materials. The dielectric material contains the dielectric film, and the dielectric film is fabricated by mixing ceramic powder into cellulose solution or paper pulp. A kind of fabrication method of the dielectric cylindrical lens, which takes the preset dielectric constant of each layer of the dielectric lens as the target equivalent dielectric constant of a composite layer structure, adjusts the dosage of ceramic powder to make a dielectric film or composite layer structure which meets the target equivalent dielectric constant, and concentrically winds the dielectric film or composite layer structure into a cylinder.