

## **Angularly-resolved variable wave-retarder using light scattering from a thin metallic cylinder**

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### **Abstract**

Experimental results show that the generation of spatially variable polarization states can be easily realized by using the light scattered from a thin metallic cylinder. The 360° angularly planar scattered light can be described as closed paths on the Poincarè sphere that connect antipodal polarizations. The simple experimental arrangement demonstrates that the thin metallic cylinder behaves as an angularly-resolved variable wave-retarder.