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标题: Terahertz tuning of whispering gallery modes in a PDMS stand-alone, stretchable microsphere
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摘要: We report on tuning the optical whispering gallery modes (WGMs) in a poly dimethyl siloxane-based (PDMS) microsphere resonator by more than 1 THz. The PDMS microsphere system consists of a solid spherical resonator directly formed with double stems on either side. The stems act like tie-rods for simple mechanical stretching of the micro-resonator, resulting in tuning of the WGMs by one free spectral range. Further investigations demonstrate that the WGM shift has a higher sensitivity (0.13 nm/mu N) to an applied force when the resonator is in its maximally stretched state compared to its relaxed state. (C) 2012 Optical Society of America
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