

Reconfigurable Plasmo-fluidic Lenses

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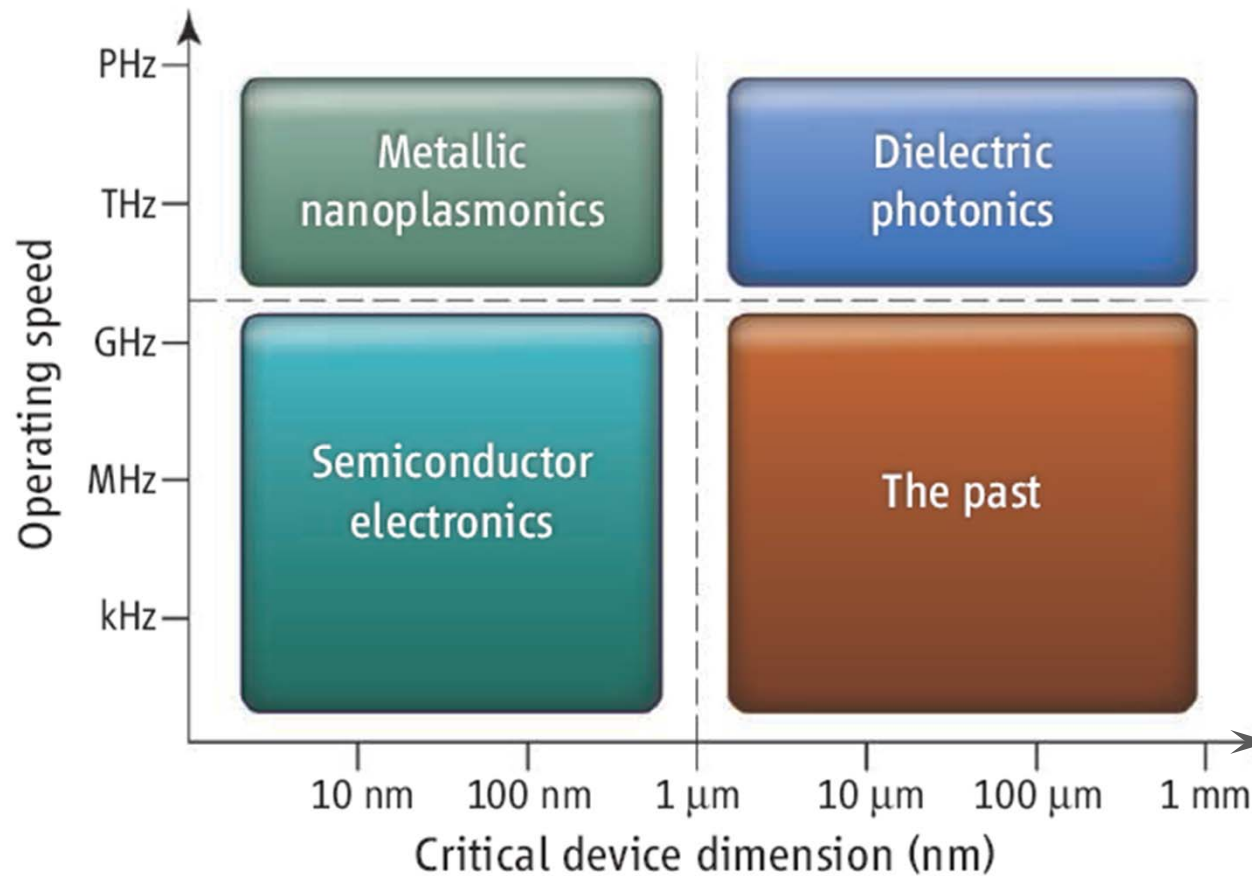
²Department of Electrical and Computer Engineering, Northeastern University

³Department of Engineering Science and Mechanics, Penn State University,

⁴Department of Mechanical Engineering, Massachusetts Institute of Technology



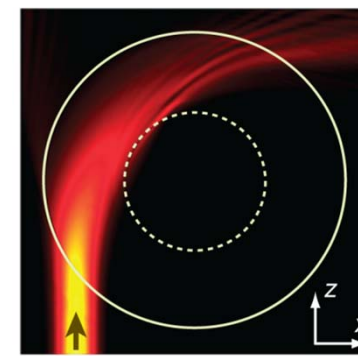
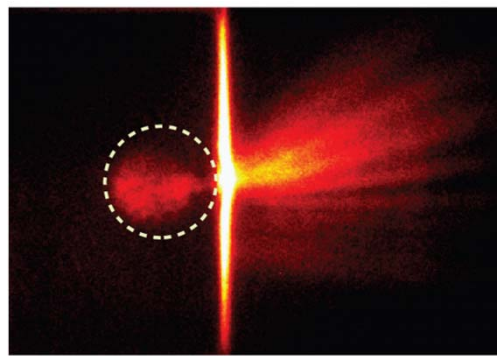
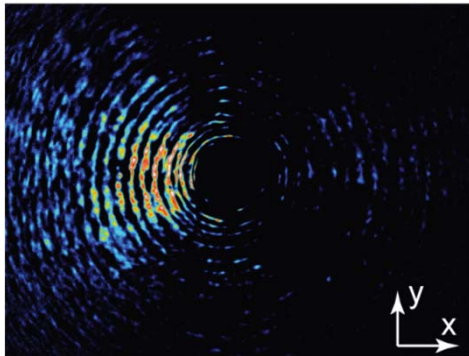
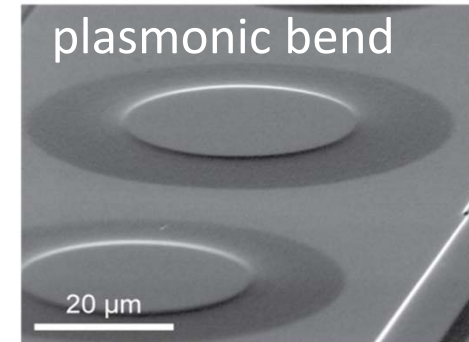
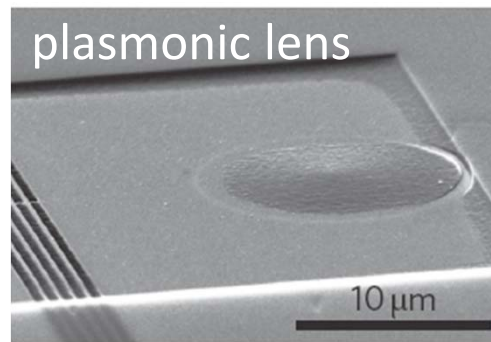
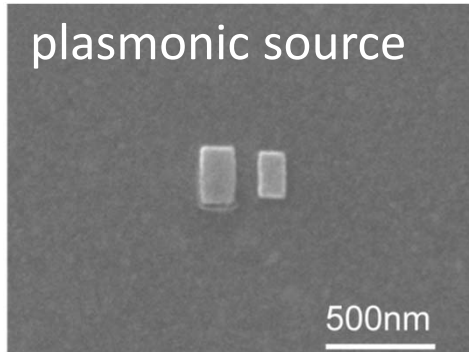
Plasmonics: Bridging Nanoelectronics and Photonics



M. L. Brongersma and V. M. Shalaev, Science 328, 440 (2010)



Various Plasmonic Devices



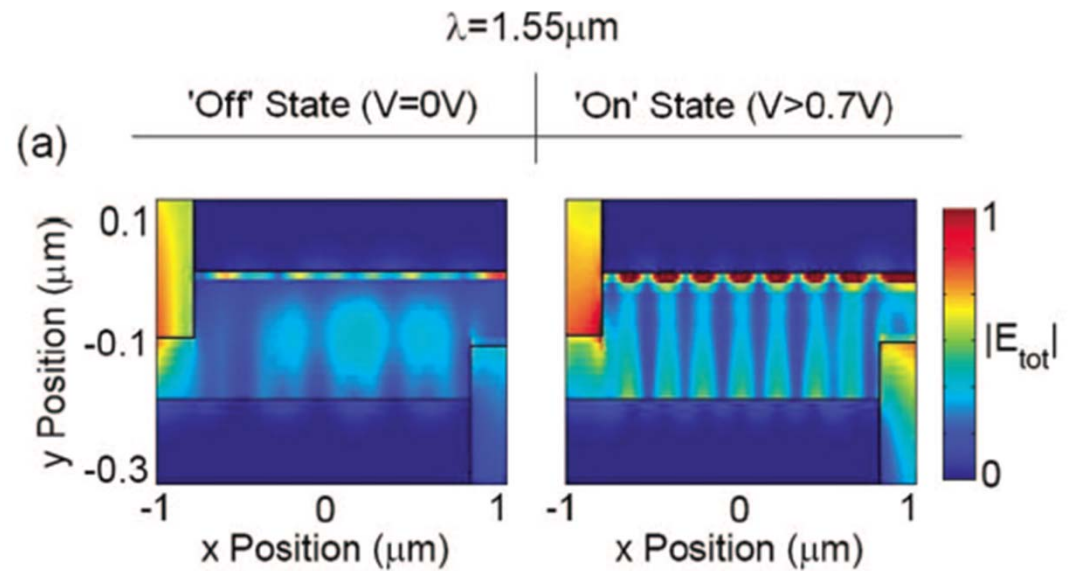
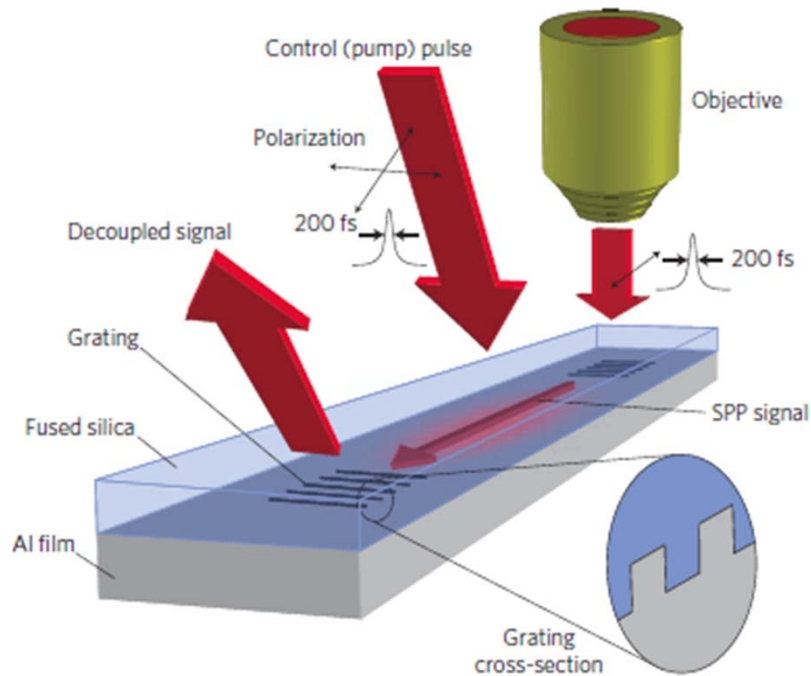
Y. M. Liu et al., *Nano Lett.* **12**, 4853 (2012)

T. Zentgraf*, Y. M. Liu* et al., *Nature Nanotech.* **6**, 151 (2011)



Northeastern

Tunable Plasmonic Devices

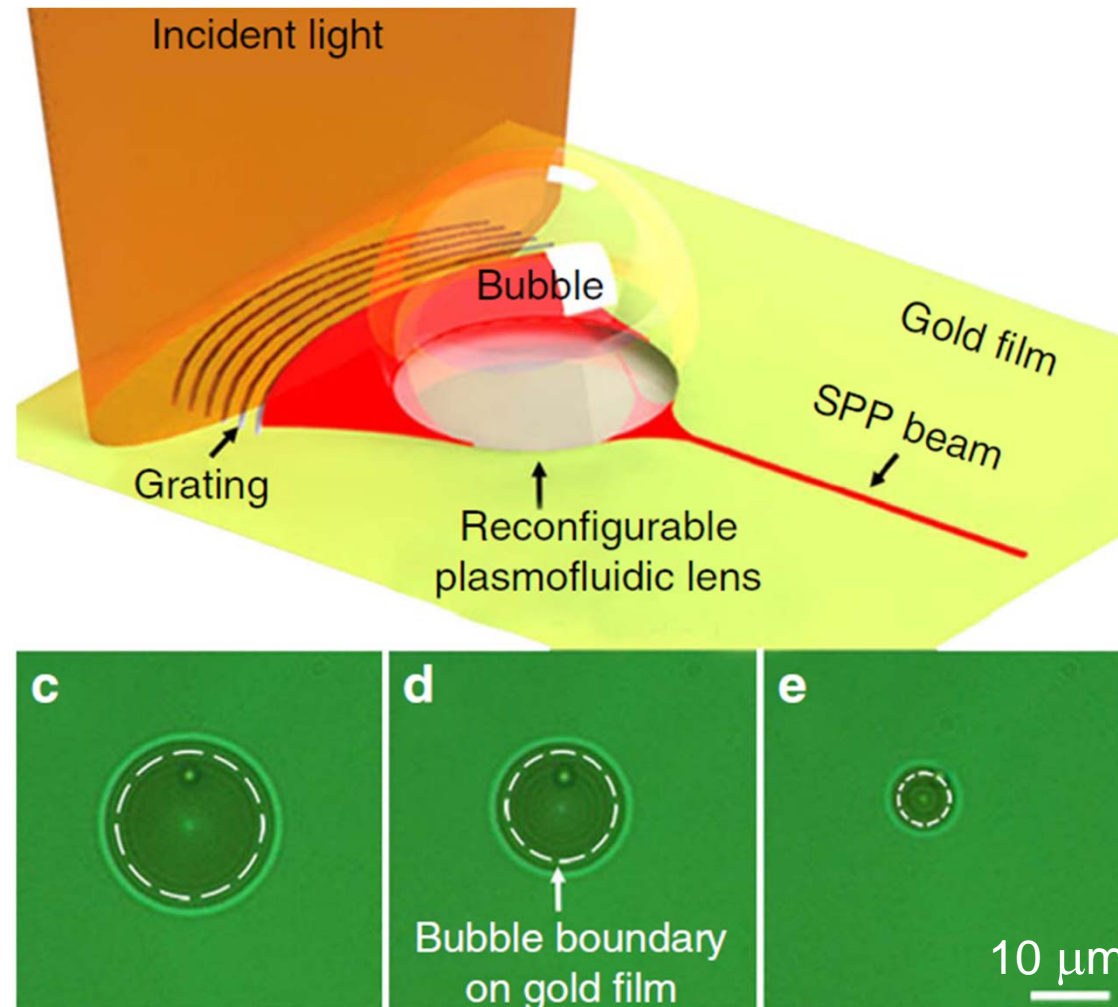


Nature Photonics 3, 55 (2009); Nano Lett. 9, 897 (2009); Nature Photonics, 4, 107 (2010)

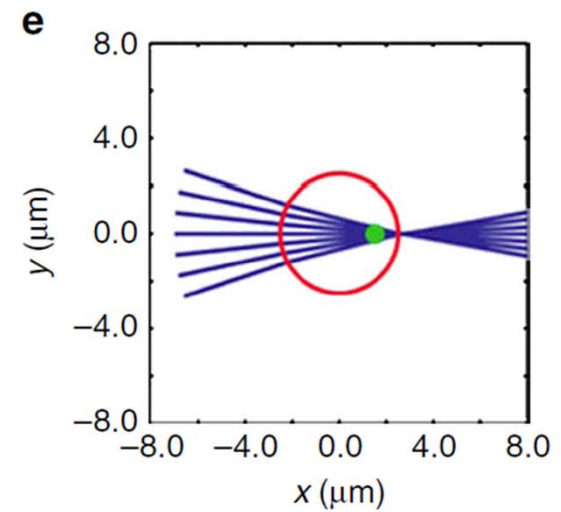
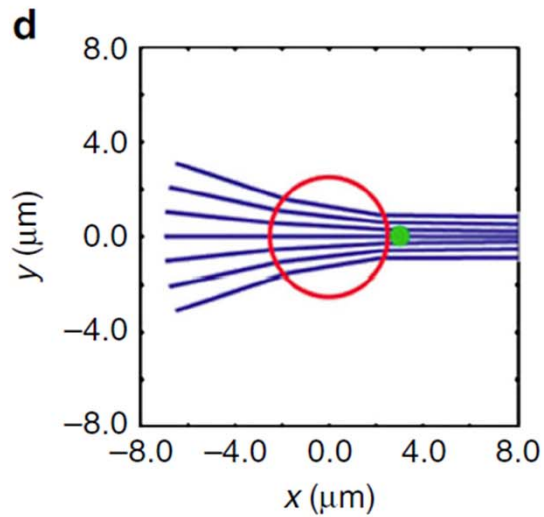
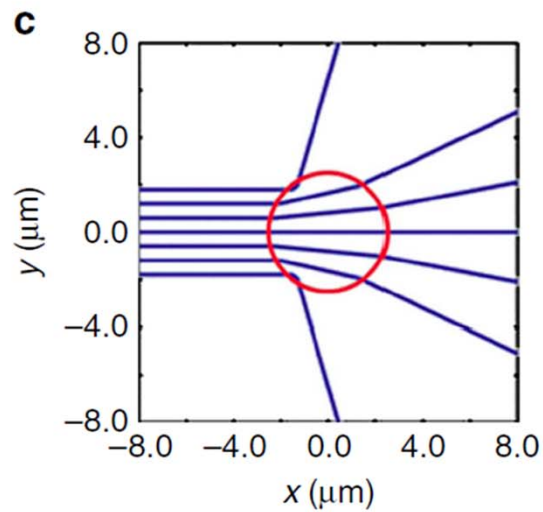
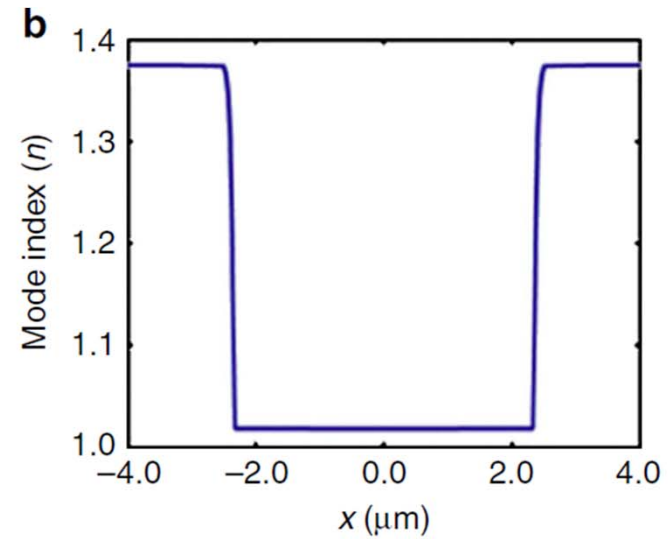
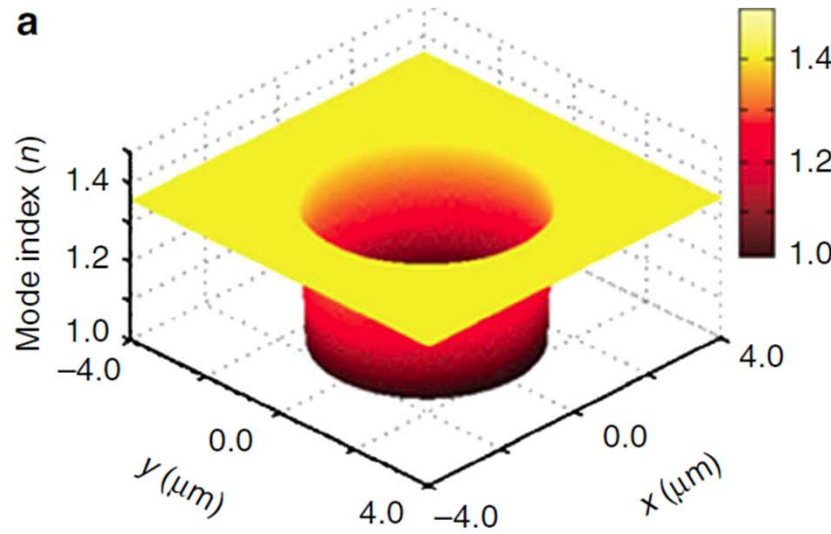
Combining plasmonics with microfluidics enables reconfigurable plasmofluidic devices for multiple functionalities



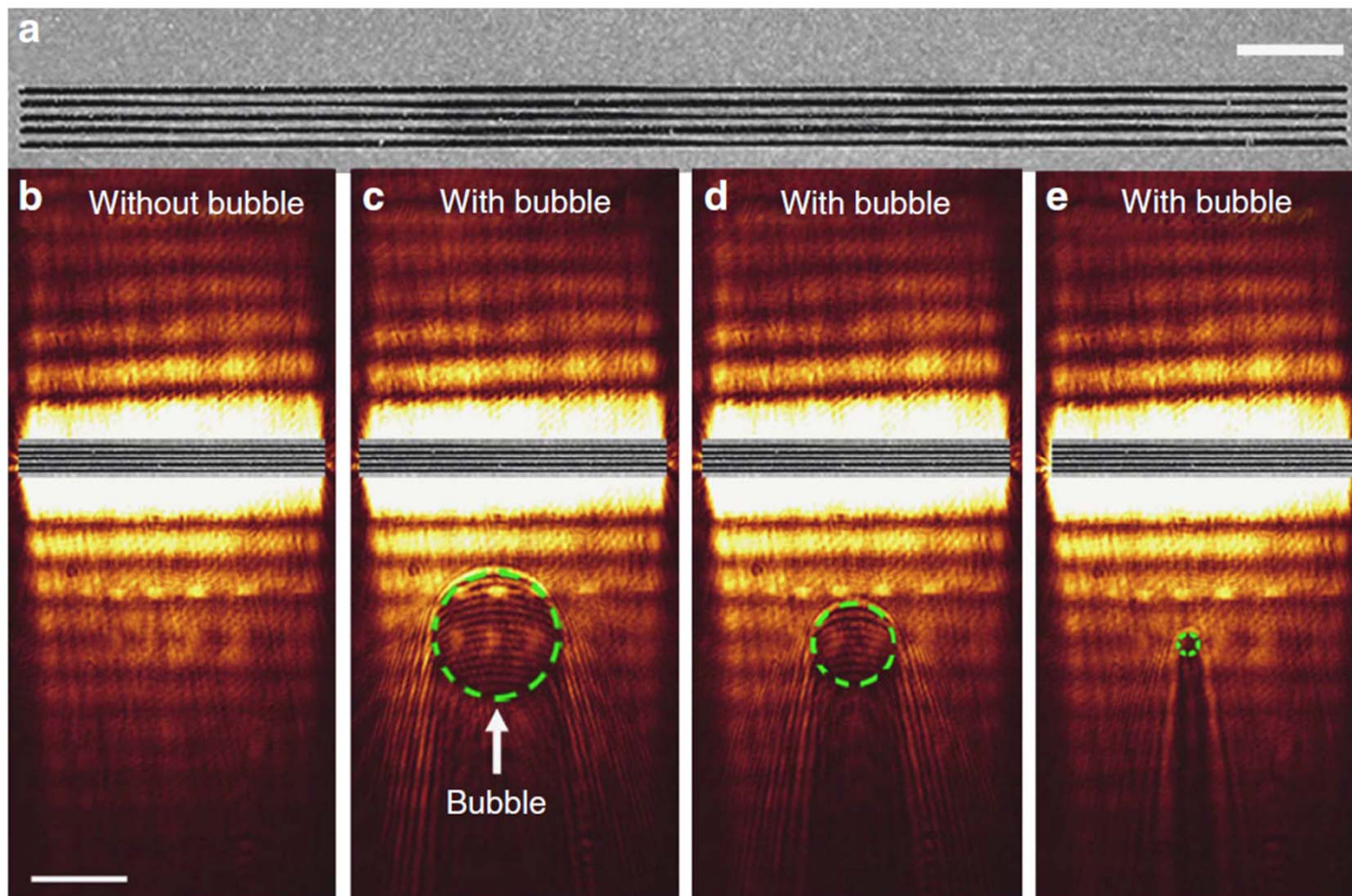
Reconfigurable Plasmo-fluidic Lenses



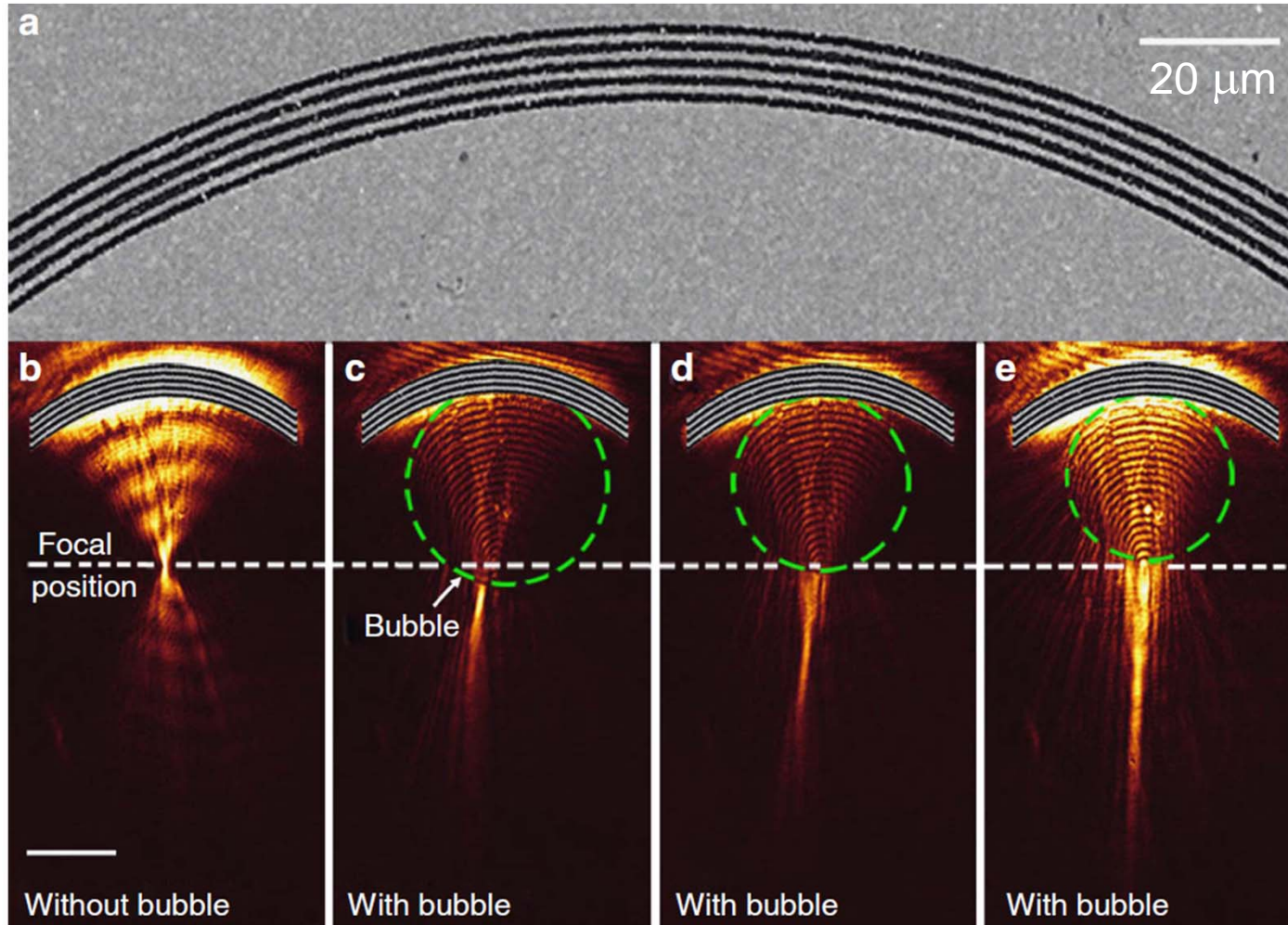
Functions of the Plasmofluidic Lens



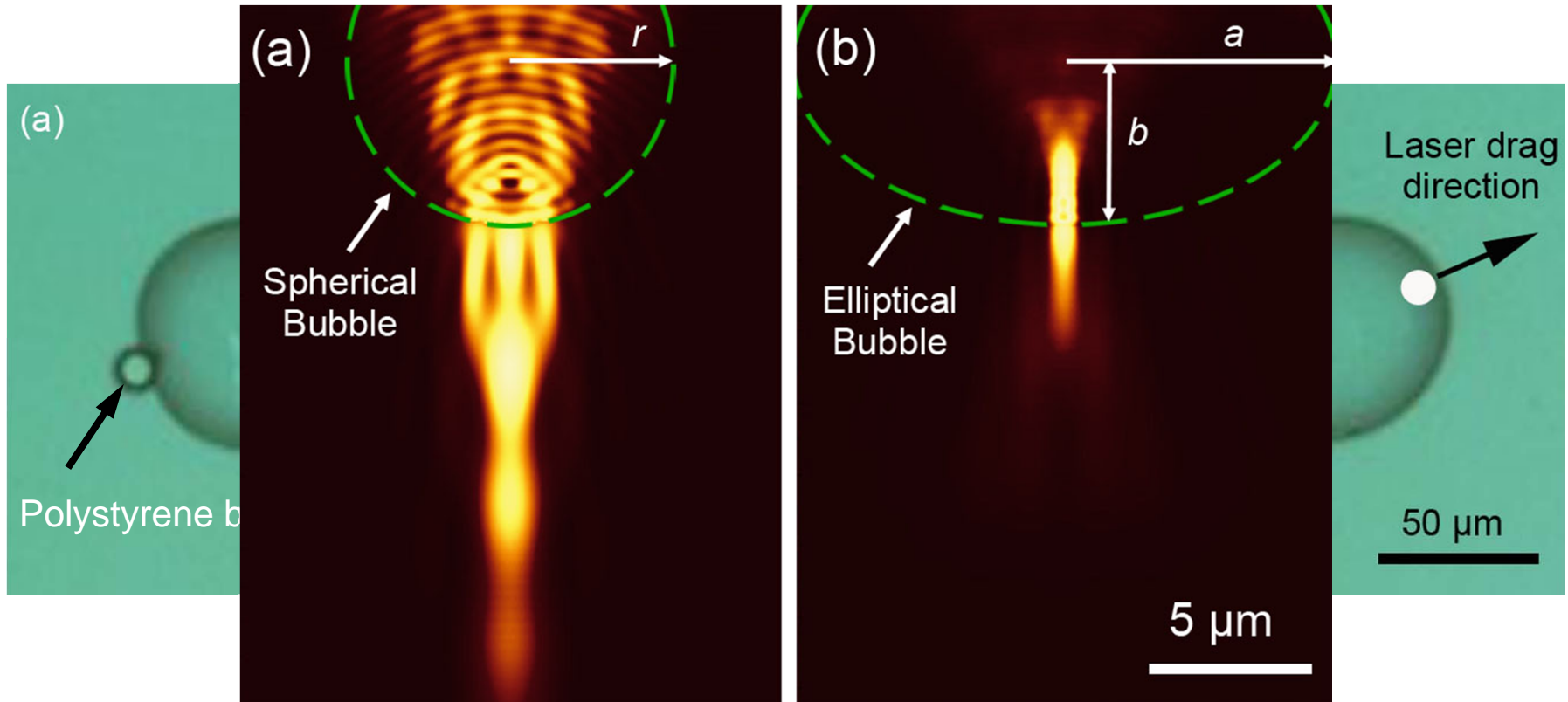
Divergence of SPPs



Focusing and Collimation of SPPs



Non-spherical Surface Bubbles



Non-spherical Surface Bubbles (cont'd)

