

## Observation of Focusing of Liquid Surface Waves

Yunfei Tang,<sup>1</sup> Jiong Yang,<sup>1</sup> Xiaohan Liu,<sup>1</sup> Jian Zi,<sup>1</sup> Xinhua Hu,<sup>2</sup> and C. T. Chan<sup>3</sup>

<sup>1</sup>Department of Physics, Fudan University, Shanghai 200433, China

<sup>2</sup>Ames Laboratory and Department of Physics and Astronomy, Iowa State University,  
Ames, Iowa 50011, USA

<sup>3</sup>Department of Physics, Hong Kong University of Science and Technology, Clear Water  
Bay, Kowloon, Hong Kong, China

Similar to photonic or phononic crystals, the propagation of liquid surface waves such as water waves in periodic structures is characterized by band structures owing to Bragg scatterings [1]. Many interesting phenomena for liquid surface waves propagating in periodic structures such as superlensing [2] and self-collimation [3] have been demonstrated. It was shown theoretically that a biconvex array of periodically bottom-mounted cylinders can act as a focusing lens for water waves [4].

We present experimental observations of focusing of liquid surface waves. We constructed a focusing lens which consists of an array of periodically arranged cylinders. The lens has a biconvex profile. With incident plane waves, we clearly observed the focusing effects in liquid surface waves. This focusing phenomenon offers a promising approach to control the flow of water waves, which may have potential applications in energy generations from water waves.

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