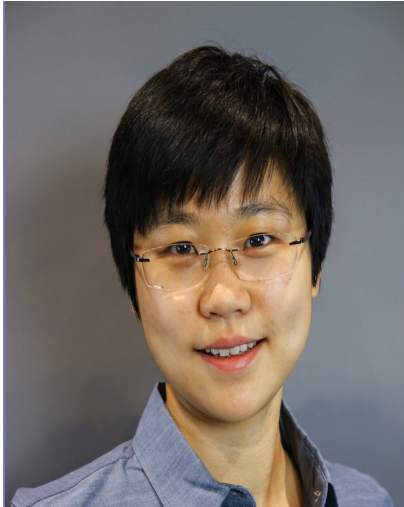


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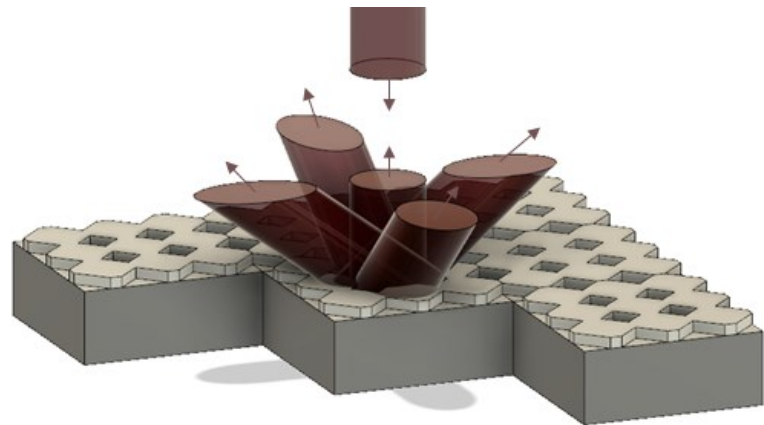
Zhaoning April Yu
(University of Wisconsin-Madison)

Diffractive chips for magneto-optical trapping of two atomic species

Tuesday, November 3rd, 2020

11:00 am ~ 12:00 pm (CDT)

ZOOM ID: 914 5695 9856



Abstract: Grating-based structures have recently been used as components of magneto-optical traps (MOT) to simplify the setup for trapping Rb atoms. Here, we design diffractive chips to trap more than one atom species. Our full-wave simulations show that a two-dimensional (2D) grating chip can simultaneously have high force-balancing efficiency for a wavelength of 780 nm for trapping Rb atoms and a wavelength of 852 nm for Cs atoms. We fabricated and characterized a mm-scale grating chip using electron-beam lithography, and are in the process of trapping experiments. Our work opens the door to compact multi-species MOTs.

Bio: Zhaoning April Yu is a graduate research assistant in the group of Prof. Mikhail Kats at the University of Wisconsin-Madison. April's research focuses on optical wave manipulation using micro and nano structuring. April has served as the secretary of the SPIE UW-Madison student chapter since 2019.



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