

## Realization of woodpile structure using optical interference holography

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We report the use of a (4+1)-beam optical interference holography technique to fabricate woodpile structures in photo-resists. The configuration consists of 4 linearly polarized side beams arranged symmetrically around a circularly polarized central beam with all the beams from the same half space, making it easily accessible experimentally.<sup>[2]</sup> The fabricated woodpile structures, shown in the figures, are in good agreement with model simulations. Furthermore, woodpiles with the diamond symmetry are also obtained by exploiting the shrinkage of the photo-resists. Bandgaps in the visible range are also observed for the samples with and without the correct stacking of the woodpile structures.

[1] Y. K. Pang, et al. *Optics Express*, 14, 9013 (2006).

[2] W. Y. Tam, <http://arxiv.org/abs/physics/0607092> (2006).

