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Experimental demonstration of a broadband array of invisibility cloaks in the visible frequency range¹ VERA SMOLYANINOVA, Towson University, IGOR SMOLYANINOV, University of Maryland, KURT ERMER, Towson University — Since the first experimental demonstration in the microwave and visible ranges, invisibility cloaks stimulated considerable progress in the fields of metamaterials and transformation optics. Arrays of invisibility cloaks may find important applications in low-interference communication, noninvasive probing, sensing and communication networks, etc. We report on the first experimental realization of such an array of broadband invisibility cloaks, which operates in the visible frequency range. Wavelength and angular dependencies of the cloak array performance will be demonstrated. Potential biochemical sensing applications will be discussed.

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