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On the Cover

The article describes an ultrathin source of photon pairs whose degree of spatial entanglement can be continuously tuned by changing the pump laser wavelength and beam profile. The photons are generated through the spontaneous parametric down-conversion process that is resonantly enhanced in a metasurface of 500 nm thickness incorporating a nonlinear lithium niobate film covered by a nanopatterned silica grating. Such a source can benefit free-space quantum communications and imaging applications. The cover image shows a schematic of a pump photon going through the metasurface and spliting into two quantum photons that are spatially entangled in the emission directions.

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The color images are shown online.