



Artist's representation of spatiotemporal photonic snake states. [Image by M. Mañas-Carbonell]

Some Highlights of Optics in 2023

Each December, OPN offers a look at some of the most interesting peer-reviewed research in optics and photonics from the past year. The "[Optics in 2023](#)" lineup included summaries of cutting-edge work from European labs. Some highlights include:

- Researchers in Spain and Russia showed that transverse snake instabilities can be tamed in suitable optical microcavities to form stationary states that they call [photonic snakes](#).
- A group in Germany combined advanced micro-optics, optical trapping and cooling, and the optical Talbot effect to [increase the number of qubits in a quantum computer](#) from several hundred to over ten thousand without proportionally requiring more resources.
- Scientists in Germany and the Netherlands demonstrated an [on-chip, robust, lightweight quantum light source](#).
- A team in the UK and Northern Ireland proposed a [new approach to tracking moving objects through scattering media](#) using correlation-based imaging.

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