

Light storage time

In this work, we demonstrate the storage of attenuated coherent light pulses in a cesium (Cs) quantum memory based on a 3D-nanoprinted hollow-core waveguide, known as a light cage (LC), with ...

We report on a record storage time of 1 s in room-temperature cesium vapor, a 100-fold improvement over existing storage schemes. Furthermore, our scheme lays the foundations for hour-long quantum ...

Light storage, the controlled and reversible mapping of photons onto long-lived states of matter, enables memory capability in optical quantum networks. Prominent storage media are warm alkali vapors due ...

Here, we load cold Rb atomic vapor into an optical trap inside a hollow-core photonic crystal fiber, and store the phase of the light in a long-lived spin wave formed by atoms and retrieve it after a fully ...

A quantum memory with a high storage efficiency and a long coherence time is an essential element in quantum information applications. Here, we report our recent development of an optical quantum ...

Phys. Rev. A 87, 031801 (2013). ^ Heinze, G., Hubrich, C. & Halfmann, T. Stopped Light and Image Storage by Electromagnetically Induced Transparency up to the Regime of One ...

The great versatility of perovskite materials makes them good candidates to be applied as light storage materials, especially those with persistent luminescence. These solids store the ...

Light storage in an optical fiber is an attractive component in quantum optical delay line technologies. Although silica-core optical fibers are excellent in transmitting broadband optical ...

The best light storage performance is achieved in the neon-filled gas cell, where in the near-resonant EIT condition, we measure a storage efficiency of percent 25 25% 25 % and a storage time of up to ...

Although silica-core optical fibers are excellent in transmitting broadband optical signals, it is challenging to tailor their dispersive property to slow down a light pulse or store it in the ...

Introduction. Storing and retrieving information in network nodes are crucial building elements for diverse applications ranging from long-distance quantum communication [1, 2] to large-scale quantum ...

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We report on the demonstration of light storage for times greater than a second in praseodymium doped Y₂SiO₅ using electromagnetically induced transparency. The long storage times were enabled by the ...

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In this paper, we present the implementation of an optical memory driven by electromagnetically induced transparency, permitting the storage of weak coherent pulses containing ...

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