Hollow-core fiber soliton

For Xe-filled fibers, nonfrequency-shifted temporal solitons with peak powers greater than 5.5 megawatts can be generated, representing an increase in the power that can be propagated in ...

We report a study of soliton self-frequency shifting in a hydrogen-filled hollow-core fiber. The combination of hydrogen and short 40-fs input pulses underlies clean and efficient generation of ...

Dispersive wave (DW) emission in a gas-filled hollow-core fiber (HCF) is an efficient way to obtain tunable VUV source with microjoule-level pulse energy. However, the shortest VUV ...

In this work, we combine efficient broadband frequency doubling, multiplate continuum (MPC) post-compression and blue soliton self-compression in hollow-core fibers (HCF), ...

Both numerical and experimental results unveiled that the pump pulse with a soliton order of ?3, launched into the hollow-core fiber, experienced two stages of pulse compression, resulting in ...

Abstract I review the historical observation and subsequent research on optical soliton dynamics in gas-filled hollow-core optical fibres. I include both large-core hollow capillary fibres, and hollow-core ...

While the analysis of Marcatili and Schmeltzer was a modal electromagnetic treatment, the very large core sizes (with respect to the wavelength) in hollow-core fibres means that good insight can be ...

In this article, I review soliton dynamics in hollow-core optical fibres filled with gases. This platform has several properties that make it very interesting.

Here, we demonstrate optical soliton dynamics in large-core hollow capillary fibres. This enables scaling of soliton effects by several orders of magnitude to the multi-millijoule energy...

In this work, large tunable soliton self-frequency shifts (SSFS) from the near to mid-IR are numerically demonstrated for two designs (D1 and D2) of 1-km long a

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