

Intense microwave pulse ionizes its own channel through plasma

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Breakthrough new research shows that ionization-induced self-channeling of a microwave beam can be achieved at a significantly lower power of the microwave beam and gas pressure for radially nonuniform plasma with minimal on-axis density than in the case of plasma formed as the result of gas ionization.

In the journal *Physics of Plasmas*, Israel Institute of Technology researchers report observing this effect for the first time and studying it in detail in a plasma preliminarily formed by a radiofrequency discharge, in a low-pressure gas (

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