



## **ICFO research featured in Optics in 2003**

November 15, 2004

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Research carried by ICFO researchers in the field of nonlinear optics, in collaboration with US and Israeli investigators, featured by Optics and Photonics News in the annual selection "Optics in 2003".

Silvia Carrasco and Lluís Torner, both ICFO researchers, in collaboration with scientists from the University of Florida (USA) led by Prof George Stegeman and from Soreq NRC (Israel) led by Dr Mordechai Katz, have contributed to the demonstration of a new phenomenon that allows the all-optical control of light signals in the form of so-called optical "solitons". Solitons are robust packets of light, often referred to as light bullets, which constitute a natural way to encode information and thus might play an important role in future all-optical information systems. The featured research reports the observation of the self-bouncing of one of such solitons in the boundary between two different materials.

This research culminates a multi-year theoretical effort from several groups around the world addressed at different strategies aimed at the control of so-called multicolor solitons, and hence opens the door to the implementation of a number of soliton processing schemes. These include the power-controlled steering and trapping of solitons using a variety of different strategies.

