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**Recent advances in the physics of localized states**

YURI KIVSHAR<sup>1</sup>, Nonlinear Physics Center, Australian National University, Canberra, Australia

We will review several examples of the existence and generation of localized states in optics and metamaterials including weakly coupled optical waveguides and arrays of nonlinear “meta-atoms” in metamaterials. We will also mention some recent studies on an interplay of nonlinearity-induced energy localization and edge states in discrete systems appeared in the systems with nontrivial topology

<sup>1</sup>Also at the ITMO University, St. Petersburg, Russia