





## Više informacija

### Abstract:

Photonic Crystals are artificially created metamaterials: they are nano-structured at scales smaller than the wavelength of light. As a result, light propagating inside them does not really resolve the structure; instead, a Photonic Crystal "appears" to light as a uniform material, but in which laws of optical physics are dramatically modified. This way, one can tailor laws of physics almost at will, designing metamaterials with optical properties dramatically different than those of any naturally occurring material. In this talk, I will present a variety of novel physical phenomena displayed by photonic crystals, including some of the exciting applications they enable.

### Bio:

Marin Soljacic has been an Assistant Professor of Physics at MIT since September 2005. He will be an Associate Professor of Physics at MIT starting July 2010. He received a BsE degree in physics and electrical engineering from MIT in 1996, and earned his PhD in physics at Princeton University in 2000. In September 2000, he was named an MIT Pappalardo Fellow in Physics, and in 2003 was appointed a Principal Research Scientist in the Research Laboratory of Electronics at MIT. His main research interests are in theory of electromagnetic phenomena, focusing on nanophotonics, non-linear optics, and wireless power transfer. He is a co-author of 97 scientific articles and 16 patents, and has given more than 70 invited talks at conferences and universities around the world.

He is the recipient of the Adolph Lomb medal from the Optical Society of America (2005), and the TR35 award of the Technology Review magazine (2006). The work on wireless power transfer that he spear-headed has been singled out as one of the most important technological developments of 2007 by the New York Times, BBC News, Scientific American, the Technology Review, and Discover Magazine.

In 2008, he was awarded a MacArthur (genius) fellowship grant.