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**Evgenii Narimanov\*** (evgenii@purdue.edu), Purdue University, School of Electrical and Computer Engineering, West Lafayette, IN 47906. *Wave Propagation and Related Phenomena in Hyperbolic Metamaterials.*

Metamaterials with hyperbolic dispersion (where two eigenvalues of the dielectric permittivity tensor have opposite signs) exhibit a broad bandwidth singularity in the photonic density of states, with resulting manifestations in a variety of phenomena, from spontaneous emission to light propagation and scattering. In particular, waves in such "electromagnetic hyperspace" do not suffer from the diffraction broadening, dramatically changing pulse propagation and focusing in these media. (Received September 11, 2012)