

S1-P.57**Zero Frequency Spectrum of 3-D Metal Photonic Crystals
Obtained by the 3-D Kronig–Penney Model**V.V. Sergentu¹ and V.V. Ursaki²¹*Institute of Applied Physics of the Academy of Sciences of Moldova, Chisinau, Moldova*²*Institute of Electronic Engineering and Nanotechnologies “D. Ghitu” of the Academy of Sciences of Moldova, Chisinau, Moldova*

We demonstrate in this work the possibility of the existence of ultrashort (dark) pure electrical modes at extremely low frequencies in a system of metallic nanospheres inserted into a dielectric material. These modes resemble usual modes of photonic crystals, but they do not have counterpart for single nanospheres.