

Colloquium Notice

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Anderson Localization in Bi-layered Structures with Compositional Disorder

The localization length (LL) has been derived for one-dimensional bi-layered structures with random perturbations in the refractive indices for each type of layers. Main attention is paid to the comparison between conventional materials and those consisting of mixed right-hand and left-hand materials. It is shown that the localization length is described by the universal expression for both cases, when the widths of layers of right-hand and left-hand materials are different. In a specific case, when the widths are equal, our analytical approach demonstrates that the inverse LL vanishes in the first order of perturbation theory. We were able to develop the expression for the LL with higher order terms, and explain puzzling numerical results, recently discussed in literature.

Monday
November 7, 2011
Starts at 12:15 PM
Coffee at 12:00 PM
Physics Conference Room, SB B326