



Macroscopic magneto-resistance of an assembly of parallel flat conducting slabs

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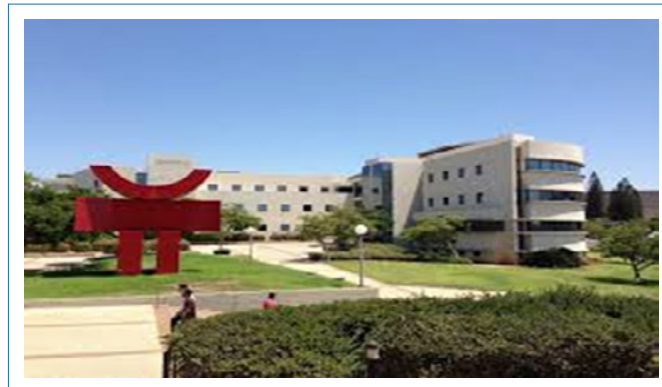
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Abstract

The macroscopic resistivity tensor of a two-constituent flat-slabs composite structure subject to an external magnetic field B is found by exact evaluation of the local electric field and current density. Despite the seemingly simple route to this exact calculation, some of the results are both novel and surprising. In particular, circumstances are found under which the macroscopic Ohmic resistivities keep increasing with B without any saturation, even when the constituent Ohmic resistivities have saturated. We also present an approximate treatment of the macroscopic resistivity tensor for an isotropic microstructure.

Biography

David J. Bergman is a professor in the field of physics in School of Physics and Astronomy, raymond and beverly sackler faculty of exact sciences, Tel aviv university in Israel. He is a retired emeritus with an experience of 51 yrs in Teaching and research. He gave many outstanding contributions with in respective field.



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