Surface states of multilayerd conducting heterostructures. GERARDO VAZQUEZ-FONSECA, Instituto de Fisica, UNAM, VICTOR MANUEL ORTEGA-MONTIEL, Universidad Nacional Autonoma de Mexico, MARCELO DEL CASTILLO-MUSSOT, Instituto de Fisica, UNAM, NELSON PORRAS-MONTENEGRO, Universidad del Valle — We discuss the existence of surface states of multilayerd conducting heterostructures, doing an analogy among the equations wich describe the physics of quantum-well structures and those wich describe the physiscs of multilayerd conducting heterostructures. The physics of infinte quantum-well structures has been studied extensibly as well as semi-infinite quantum-well structures. The electromagnetic propagation of multilayerd conducting heterostructures has been studied using different aproximations. Within the hidrodynamic model of electron dynamics, we found an expression for the bulk and for the surface states of multilayerd conducting heterostructures similar to those found in quantum-well structures.

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