

Abstract Submitted  
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**Giant Photonic Band Gaps in one dimensional Photonic heterostructures**<sup>1</sup> JESUS MANZANARES-MARTINEZ, RAUL ARCHULETA-GARCIA, Universidad de Sonora — In this work we show that it is possible to design Giant Photonic Band Gaps in Heterostructures via the determination of the group velocity. A photonic Heterostructure is composed by the union of two or more distinct photonic crystals. We present the calculation of the Heterostructure band structure implementing the supercell technique in the Wave Plane Method. We show that even if the Heterostructure present a very complicated Photonic Band structure, it is possible to discriminate the regions of low (high) transmission obtaining the group velocity. We verify the very existence of the forbidden (allowed) regions with the theoretical calculations of the light transmission.

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