

Abstract Submitted
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Shape managing the cross-section of a semiconductor nanowire as a method for fine tuning electro-optical properties¹ OSMAN BARIS MALCIOGLU, JEAN-YVES RATY, University of Liege, SORIN MELINTE, Université Catholique de Louvain — Geometry design in nanowire and nanopillar arrays is used to create photon managing structures in a number of optical applications ranging from photovoltaics to field emission devices. The diameter dependence of the intrinsic properties of the material at the nanoscale provides further tunability and significantly improved performance. Using ab-initio methods (TDDFT), we explore the additional possibility of tuning and enhancing the optical properties by fine structuring the cross-sectional geometry.

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