

Porous III–V compound semiconductors: formation, properties, and comparison to silicon

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Abstract

Abstract Pore formation in n-type III–V semiconductors will be discussed and compared to pore formation in silicon. While by now many different kinds of pores were produced in silicon, the “pore zoology” in III–Vs was rather limited until recently. This paper will briefly review the specific pore morphologies in some compound semiconductors, nucleation and formation mechanisms, the relation to comparable Si pores (including some new observation in Si), and the particularly striking features that pores in III-semiconductors exhibit many features of self organization and on occasion peculiar luminescence properties.